codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Via delle Terme di Caracalla 00100 ROME: Tel. 57971 Telex: 610181 FAO I. Cables Foodagri Facsimile: 6799563

ALINORM 89/24

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Eighteenth Session
Geneva, 3 - 14 July 1989

REPORT OF THE TWENTIETH SESSION OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES
The Hague
18 - 25 April 1988

NOTE: This document incorporates Codex Circular Letter 1988/35-PR

W/Z3571

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CX 4/40.2

CL 1988/35-PR
July 1988

TO : - Codex Contact Points
- Participants at the 20th Session of the Codex Committee on Pesticide Residues
- Interested International Organizations

FROM : Chief, Joint FAO/WHO Food Standards Programme, FAO, 00100 Rome, Italy

SUBJECT: Report of the Twentieth Session of the Codex Committee on Pesticide Residues

The report of the 20th Session of the Codex Committee on Pesticide Residues (CCPR) (Ref. ALINORM 89/24) will be considered by the 18th Session of the Codex Alimentarius Commission to be held in Geneva, 3 - 14 July 1989.

PART A MATTERS OF INTEREST TO THE CODEX ALIMENTARIUS COMMISSION

(1) Maximum Residue Limits at Steps 5 and 8 - these will be included in document ALINORM 89/24-Add.1 and distributed with a separate circular letter later in 1988.

(2) Proposed non-substantial Changes to Codex Maximum Residue Limits - these will be included in document ALINORM 89/24-Add.1 and distributed with a separate circular letter later in 1988.

(3) Other matters requiring action by the Commission will be included in document ALINORM 89/21 to be distributed prior to the Commission's session in 1989.

PART B COMMENTS AND/OR INFORMATION REQUESTED FROM GOVERNMENTS AND INTERESTED INTERNATIONAL ORGANIZATIONS

(1) Proposed definitions of "Good Agricultural Practice in the Use of Pesticides" and "Maximum Residue Limit" (see para. 22 and Appendix V, ALINORM 89/24)

Comments should be sent to Dr. J. van der Kolk, Ministry of Welfare, Health and Cultural Affairs, Foodstuffs Division, Postbox 5406, 2280 HK Rijswijk, The Netherlands, not later than the end of October 1988, with a copy to this office.

(2) General maximum residue limits for "fruits" and "vegetables" (see para. 49, ALINORM 89/24)

General Codex MRLs for fruits and vegetables exist for the following pesticides:

aldrin and dieldrin (001)	fruit 0.05 mg/kg
azinphos-methyl (002)	fruit 1 mg/kg, vegetables 0.5 mg/kg
chlordane (012)	fruit and vegetables 0.02 mg/kg(*)E
DDT (021)	fruit and vegetables 1 mg/kg

(*) Level at or about the limit of determination
E Extraneous residue limit

diazinon (022)	fruit and vegetables (except leafy vegetables and sweet corn) 0.5 mg/kg
dichlorvos (025)	fruit 0.1 mg/kg, vegetables (except lettuce) 0.5 mg/kg
dicofol (026)	fruit (except strawberries) and vegetables (except cucumbers, gherkins, tomatoes) 5 mg/kg
dimethoate (027)	vegetables (not otherwise listed) (withdrawn by the 17th Session of the Codex Alimentarius Commission)
diquat (031)	vegetables 0.05 mg/kg (*)
endosulfan (032)	fruit and vegetables (except carrots, potatoes, sweet potatoes, onions) 2 mg/kg
heptachlor (043)	vegetables (except carrot, soyabean, sugar beats, tomatoes) 0.05 mg/kg E
omethoate (055)	vegetables (not otherwise listed) (withdrawn by the 17th Session of the Codex Alimentarius Commission)
paraquat (057)	vegetables 0.05 mg/kg (*)
parathion (058)	vegetables (except carrots) 0.7 mg/kg
parathion-methyl (059)	fruit 0.2 mg/kg
piperonyl butoxide (062)	fruit and vegetables 8 mg/kg
pyrethrins (063)	fruit and vegetables 1 mg/kg
bromopropylate (070)	vegetables 1 mg/kg
disulfoton (074)	vegetables 0.5 mg/kg
tecnazene (115)	vegetables (except chicory, lettuce) 0.1 mg/kg

Comments should be sent on these general Codex limits as indicated in PART B, para. (1) above.

(3) Specific Requests for residues and toxicological data

Information on use patterns, good agricultural practices, residues data, national MRLs etc. should be sent to Dr. F-W. Kopisch-Obuch, AGP, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Toxicological data should be sent to Dr. J. L. Herrman, International Programme on Chemical Safety, World Health Organization, 1211 Geneva 27, Switzerland.

(i) Pesticides for which MRLs are being elaborated

CHLORPYRIFOS (017)	residues data in dried grapes (para 65, ALINORM 89/24)
DIMETHOATE (027)	residues data (para 70, ALINORM 89/24)
FENITROTHION (037)	residues data on cereals (para 72, ALINORM 89/24)
ORTHO-PHENYLPHENOL (056)	residues data on melons (whole commodity) (para 78, ALINORM 89/24)

(*) Level at or about the limit of determination
E Extraneous residue limit

METHOMYL (094)	residues data on apples, grapes, dry hops (para 95, ALINORM 89/24)
PHOSMET (103)	toxicological data (para 101, ALINORM 89/24)
ETU (108)	residues and other data (para 105, ALINORM 89/24)
IMAZALIL (110)	residues data on strawberries (para 111, ALINORM 89/24)
PERMETHRIN (120)	residues on wheat bran (para 124, ALINORM 89/24)
ETRIMFOS (123)	residues data on current GAP (para 126, ALINORM 89/24)
PHENOTHRIN (127)	residues data (para 129, ALINORM 89/24)
AZOCYCLOTIN (129)	toxicological and other data (paras 81 and 131, ALINORM 89/24)
DELTAMETHRIN (135)	residues data on Brassica vegetables, head cabbages, flowerhead Brassicas (para 137, ALINORM 89/24) and residues data on olives (para 140, ALINORM 89/24)
BENDIOCARB (137)	residues data (para 142, ALINORM 89/24)
METALAXYL (138)	residues data (para 144, ALINORM 89/24) and residues data on strawberries (para 148, ALINORM 89/24)
PHOXIM (141)	residues data on lettuce, sheep meat, tomato (para 150, ALINORM 89/24)
PROCHLORAZ (142)	residues data in animal products (para 153, ALINORM 89/24) and GAP data on citrus fruits (para 154, ALINORM 89/24)
TRIAZOPHOS (143)	residues data (para 155, ALINORM 89/24)
FLUCYTHRINATE (152)	storage stability data in animal feeds (para. 167, ALINORM 89/24)
BENALACYL (155)	GAP data on grapes (para 170, ALINORM 89/24) residues data on dry hops (para 172, ALINORM 89/24) and residues data on sweet peppers (para 173, ALINORM 89/24)
CLOFENTEZINE (156)	residues data on citrus fruits (para 178, ALINORM 89/24)
VINCLOZOLIN (159)	residues data on apricots (para 186, ALINORM 89/24)

(ii) Evaluation of pesticides for which Guideline levels have been set

COUMAPHOS (018)	para 193, ALINORM 89/24
DEMETON-S-METHYL (073)	para 194, ALINORM 89/24
DINOCAP (087)	para 195, ALINORM 89/24
BIORESMETHRIN (093)	para 197, ALINORM 89/24
DIALIFOS (098)	para 198, ALINORM 89/24
DAMINOZIDE (104)	para 199, ALINORM 89/24
ETHEPHON (106)	para 200, ALINORM 89/24
PROCYMIDONE (136)	para 201, ALINORM 89/24

PTU (150) paras 105 and 203, ALINORM 89/24

PYRAZOPHOS (153) para 204, ALINORM 89/24

(4) Fumigants

Information on the use of fumigants on food crops (paras 205-207, ALINORM 89/24) should be sent to Mr. M. Hoffman, Head of Pesticide Division, Department of Plant Protection and Inspection, Ministry of Agriculture, P.O. Box 78, Bet Dagan 50250, Israel with a copy to this office not later than the end of October 1988.

(5) Up-dating of Recommendations for Methods of Residue Analysis and Analytical Quality Assurance

The Chairman of the Working Group will distribute a list of references to methods of residue analysis and other relevant material for comments (see para 3, Appendix III, ALINORM 89/24).

(6) Recommended Method of Sampling for the Determination of Pesticide Residues in Meat and Poultry Products (see paras 216-217, ALINORM 89/24)

The draft sampling method will be distributed for comments with circular letter CL 1988/33-PR during the middle of 1988.

(7) Priorities for Developing Countries

Developing countries are requested to identify the pesticides and food commodities of particular interest to them for the establishment of Codex maximum residue limits and to develop appropriate residues and other data for them (see para 272, ALINORM 89/24). Any available information on the pesticide residues in the food commodities and any toxicological information should be sent to the Secretariat of the JMPR as indicated in Part B, para (3) above.

(8) Questionnaire on Regulatory Practices

A questionnaire requesting information on the "Recommended National Regulatory Practices to Facilitate Acceptance and Use of Codex MRLs" (CAC/PR 9-1985) will be distributed during 1988 (see paras 237 and 242(a), ALINORM 89/24).

(9) Information on Food Intake Data

Governments are requested to provide information on food intake data, especially for foods covered by Codex MRLs and other relevant information in order to enable WHO to prepare estimates of pesticide residue intakes on the basis of the "Guidelines for Predicting Dietary Intake of Pesticide Residues" (document WHO/EHE/FOS/88.2) (see paras 241, 243, ALINORM 89/24).

Information should be sent to Dr. Galal-Gorchev, Environmental Hazards and Food Protection, World Health Organization, CH-1211 Geneva 27, Switzerland, as soon as possible.

(10) Information on Pesticides evaluated prior to 1976
(see para 250, ALINORM 89/24 and circular letter CL 1988/20-PR)

TABLE OF CONTENTS

INTRODUCTION

1. The Codex Committee on Pesticide Residues held its Twentieth Session in The Hague, The Netherlands, from 18-25 April 1988. 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 44 countries:

Argentina	Finland	Nigeria
Australia	France	Norway
Austria	Gabon	Poland
Belgium	Germany, Fed.Rep.of	Portugal
Botswana	Hungary	Republic of Korea
Brazil	Ireland	San Marino
Canada	Israel	Senegal
Chile	Italy	Spain
China, People's Rep.of	Japan	Sweden
Côte d'Ivoire	Jordan	Switzerland
Cuba	Madagascar	Thailand
Czechoslovakia	Malaysia	United Kingdom
Dem.People's Rep.of Korea	Mexico	United States of America
Denmark	Netherlands	
Egypt	New Zealand	Yugoslavia

The following International Organizations were also represented:

Association of Official Analytical Chemists (AOAC)
European Economic Community (EEC)
European and Mediterranean Plant Protection Organization (EPPO)
International Federation of National Associations of Pesticide Manufacturers (GIFAP)
International Dairy Federation (IDF)
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

2. The Twentieth Session was opened by Ir.Drs. R.B.J.C. van Noort, Director-General of the National Institute of Public Health and Environmental Hygiene of The Netherlands. The opening speech is attached as APPENDIX II.
The Director-General expressed his sincere thanks to Mr. Pieters who had chaired this Committee since 1974 and who had indicated that this 20th Session would be his final one. The Director-General stated that The Netherlands would continue to bear responsibility for this Committee.
The Secretariat's representative, Dr.A.W. Randell, read a letter from Dr. Rafael Moreno, Assistant Director-General a.i. of the Economic and Social Department of FAO, in which he recognized Mr. Pieters' valuable contribution to the work of FAO in the field of pesticides.
On behalf of the Assistant Director-General Dr.J.-P. Jardel, Dr. H. Galal Gorchev presented the acknowledgements of WHO of Mr. Pieters' leading role in this specialized field of public health, which was recognized through the presentation of the WHO Health for All Medal.

ADOPTION OF THE AGENDA

3. The agenda and the time schedule for the plenary session and for working groups was announced in CX/PR 88/1.
The agenda was adopted without change.

APPOINTMENT OF RAPPORTEUR

4. Ms. E. Campbell (United States of America) was appointed to act as rapporteur to the Committee.

MATTERS OF INTEREST TO THE COMMITTEE

Matters arising from the Commission

5. The Committee considered a working paper (CX/PR 88/3) on matters of interest.

Codex Alimentarius Commission/Codex Committee on General Principles

6. The Committee noted that the Commission, at its 17th Session, had referred to it and to the JMPR the request of the Codex Committee on General Principles contained in para 153, ALINORM 87/39. The Committee had been requested to consider (a) guidelines to encourage good agricultural practices leading to the lowest possible residues at harvest and, as a result, the lowest possible legal limits; (b) health aspects fully when setting Codex MRLs; (c) the significance of commodities in international trade and in the diet when setting MRLs; and (d) whether further advice to governments was needed to assist them in implementing Codex MRLs.

7. The Committee noted that these points would come up under later agenda items where they would be considered. However, it was agreed that, regarding point (b) above, it was the Committee's policy and practice to consider health aspects fully. The Secretariat was requested to ensure that the Commission and Codex Committees be properly informed about the work of the CCPR in considering health questions in developing its recommendations concerning MRLs.

Matters arising from the Codex Committees

Codex Committee on Residues of Veterinary Drugs in Food (CCRVDF)

8. The Committee noted that the CCRVDF had, at its second Session, referred a definition of 'maximum residue levels' to Governments for comments. The proposed definition of MRL for veterinary drugs in food would be set on the basis of an ADI ortemporary ADI but could be reduced to reflect the needs of good practices in the use of veterinary drugs (paras 73-77, 209, ALINORM 87/31).

9. During the discussions the following remarks were made by delegations:
(a) Setting MRLs on the basis of ADIs and food factors could lead to MRLs higher than needed in good practices; (b) occasionally two MRLs may result for one and the same chemical from the work of the CCRVDF and the CCPR; (c) setting MRLs on considerations of toxicity offered an assurance concerning safety; (d) there was a need to assess total residue intake from all sources in order to be able to assess risk; (e) a common approach to residues of pesticides and veterinary drugs should be adopted by Codex.

10. Concerning the suggestion that a paper be prepared comparing the approach followed by the CCPR and by the CCRVDF, it was agreed that this would be premature. Governments should study the reports of the CCRVDF (ALINORM 87/31) and of the 32nd Session of JECFA and comment on the definition of 'MRL' suggested by the CCRVDF (see CX/PR 88/3, Part B). The Committee again reiterated that health considerations did play an important role in setting MRLs for pesticides, and that any impressions on implications to the contraryshould be corrected (see also paras 16-22).

Introduction of Prior-Informed-Consent (PIC) into the International Code of Conduct on the Distribution and Use of Pesticides

11. In November 1987 the FAO Conference considered a progress report on the implementation of the Code of Conduct and adopted a resolution by consensus that the principle of PIC should be incorporated into the Code within the biennium 1988/89.

12. As requested by the Conference, an Expert Consultation on Procedures and Modalities of Introduction of the PIC Clause in Article 9 of the Code took place in Rome at the end of March 1988. The Consultation reviewed the current status of PIC in national and international organizations and considered options to incorporate the principles of PIC into the Code in an operational way.

13. The Consultation recommended that a Government Consultation be held before submitting PIC schemes to the FAO Committee on Agriculture (COAG) to explore and consider the various options for such a scheme by Governments.

Matters arising from International Organizations

European Economic Community (EEC)

14. The Representative of the EEC informed the Committee of the EEC Directives 86/362 and 86/363 on maximum residue limits for cereals and foods of animal origin, which will become effective in July 1988. Unlike earlier Directives these did not provide for optionality in the establishment of MRLs by EEC member countries. The Directives on fruits and vegetables were being revised and extended in scope and Directives on animal feedingstuffs would be in force in December 1990 (see Official Journal of the EEC No L 304 of 2/10/87 page 38).

GIFAP

15. The Representative of GIFAP informed the Committee of the recently published manual for the agrochemical industry "Working with the JMPR and CCPR" which described the interest of the industry in the work of the JMPR and the CCPR and which provided guidelines to members of industry concerning these bodies. The manual was also available to governments and interested persons.

IUPAC

15A. The Representative of IUPAC announced plans for holding of the Seventh IUPAC International Congress of Pesticide Chemistry, 5-10 August 1990, in Hamburg, Fed.Rep.of Germany.

CODEX SEMINAR ON GOOD AGRICULTURAL PRACTICE

16. The Chairman of the Seminar, Mr. J. van der Kolk (The Netherlands), gave a summary of the papers presented during the Seminar by the various invited speakers and identified a number of issues in relation to "Good agricultural practice" which might be further considered by the Committee.

17. The Seminar had been organized in order to give participants an opportunity to discuss the concept of "good agricultural practice" (GAP), referred often in Codex and JMPR work, from various points of view. The following lectures (*) were presented:

- Introductory lecture on the procedures followed by the CCPR and the JMPR, by the Chairman of the Seminar, J. van der Kolk (The Netherlands)
- The Concept of GAP as viewed by the JMPR, J.A.R. Bates (United Kingdom)

- Relationship between Toxicology and GAP and the Role of the JMPR in the Assessment of Consumer Safety of Codex MRLs - Guidelines for Prediction of Dietary Exposure, E.M. den Tonkelaar (The Netherlands)
- GAP and MRLs: The Role of Industry and various Aspects as seen from an Industry Perspective, G.A. Willis (GIFAP)
- Finnish Perspectives on the Role of GAP especially from a Point of view of Consumer Protection, V. Tuomaala (Finland)
- United States Perspectives on the Meaning and Use of Pesticide GAP Concepts, S.N. Fertig (USA)
- GAP in the Use of Pesticides on Apple - Report on the EPPO Meeting on GAP (Harpenden, UK 1987), I.M. Smith (EPPO)

18. The lectures and papers identified questions in relation to GAP and the Role of Codex MRLs in ensuring a safe food supply. The points were made that (a) data available to the JMPR for setting MRLs necessarily reflect a range of maximum registered uses rather than "normal practices" which are not easily defined; (b) in the interest of consumer protection residues in food should be as low as possible even if higher residues might be allowed by the ADI; (c) the FAO/WHO/UNEP guidelines for the prediction of dietary intake of pesticide residues should be used to assess exposure to pesticide residues; (d) approach to the generation of residues data should be harmonized and countries should accept the evaluations of the JMPR, thereby reducing the need for re-evaluation at the national level; (e) monitoring showed that residues in food are considerably lower than the data base used by the JMPR suggested; (f) Codex MRLs should not be set where there is a possibility that the ADI is exceeded and the additive effects of toxicologically related pesticides should be considered: (g) the geometrical progression of figures used by the JMPR and CCPR for developing MRLs should be reconsidered; (h) the farm-gate approach ensures a uniform basis for setting MRLs; (i) difficulties in accepting Codex MRLs are due more to lack of understanding of concepts than to the concepts themselves: (j) pesticides should be used in a manner which results in the lowest possible residues and MRLs while maintaining effective pest control; (k) efforts should be concentrated on re-evaluation of pesticides of concern and countries should recognize the pest control needs of others.

19. The issues arising from the Seminar which, in the opinion of Mr. van der Kolk, the Committee should consider are the following:

(a) Should the Codex definitions of "GAP" and "MRL" be revised and amended?
(b) Should the use of the geometrical progression of numbers (0.1, 0.2, 0.5, 1, 2, 5, 10 etc.) for setting Codex MRLs be reconsidered and abandoned?
(c) How can the basic concepts of the work of the CCPR be better explained?
(d) Is the effort of EPPO of defining GAP at the international level a useful exercise for the CCPR?
(e) What can be done to alleviate the problem producing countries are facing in having to align their GAP in order to be able to comply with the multitude of varying pesticide residues regulations in importing countries?

(*) The papers and summaries of the lectures will be published by The Netherlands.

20. The Committee had a detailed discussion on the question of whether the Codex definitions of 'GAP' and MRL should be revised. A number of delegations were of the opinion that reference to the safety of the consumer should be included in the appropriate definition. Other delegations favoured the deletion of reference to toxicological acceptability of the residues in the definition of 'GAP' and the inclusion of such a reference either in explanatory notes or in the definition of Codex MRLs. The Committee agreed that a small group of delegates should redraft the definitions of 'GAP' and 'MRL' in the light of the remarks made during the Session, with the assistance of the Secretariat.

21. As regards 'GAP' the Committee noted that disagreement on what constitute good practices in the use of pesticides was one of the reasons why some Governments could not accept some Codex MRLs. This was due to the fact that GAP can only be defined at the national level. Codex MRLs encompass various national GAPs and are intended primarily to facilitate international trade. Agreement on internationally acceptable MRLs at the lowest possible level, covering the needs of variations of GAP should be aimed at, taking into account consumer safety. In this respect the use of a geometrical progression of numbers for setting Codex MRLs would have to be reconsidered.

22. Mr.A.Black (Australia) presented the draft definitions for GAP and Codex MRL worked out by the small drafting group (see para 20). Discussions centered around the definition of the explanatory notes to be included with the definition of Codex MRL. These described how MRLs were developed by the JMPR and the CCPR and indicated how consideration of dietary intake should show that food complying with Codex MRLs is safe for human consumption. It was agreed that the proposed definitions contained in APPENDIX V should be sent to governments and the JMPR for comments and that they should be reconsidered at the next Session in the light of comments received.

CONSIDERATION OF THE REPORTS OF THE 1986 AND 1987 JOINT FAO/WHO MEETINGS ON PESTICIDE RESIDUES (JMPR)

23. The report of the 1986 and 1987 Joint Meeting were before the Committee for consideration (FAO Plant Production and Protection Papers 77 and 84, respectively). The report of the 1986 Joint Meeting had been considered by the Nineteenth Session of the CCPR. It was indicated by the JMPR Secretariat that several corrections would be published as a corrigendum in the report of the 1988 JMPR.

24. The delegation of Egypt asked whether cooking and processing were taken into account when setting MRLs, as residue levels could increase during processing. In response, it was pointed out that for those processed foods moving in international trade for which Codex MRLs were set, changes in residue levels during processing were taken into account.

25. The Committee noted that the 1987 Joint Meeting had considered a number of issues of a general nature, which would best be considered under their respective items on the agenda. The Committee expressed its appreciation to Dr.Kopisch-Obuch (FAO Joint Secretary) for making the report and 'Evaluations' arising from the 1987 Joint Meeting available in good time prior to the Session of the CCPR. As a result, it was agreed that consideration of the report of the 1987 Joint Meeting need not be included on the agenda of the 1989 Session of the CCPR.

REPORT ON ACCEPTANCES BY GOVERNMENTS OF CODEX MAXIMUM RESIDUE LIMITS

(a) Report by the Secretariat

26. The Committee had before it document CX/PR 88/4, prepared and introduced by the Secretariat, which outlined information received since the last session of the Committee. It was noted that Hungary and Brazil had responded positively on the basis of the first edition of Volume XIII of the Codex Alimentarius. The Committee also noted that information had been provided by Portugal and, at the present session, Finland.

27. In the case of the reply from Hungary in addition to 30% of full, limited or target acceptances, 43% of the Codex MRLs were found to be suitable for indicating that food complying with these would be allowed free entry. The Committee was informed that this form of acceptance was being increasingly favoured by countries which responded.

28. The Committee noted that in many cases "free entry or distribution" could be considered as a form of Limited Acceptance, especially where the importing country had more stringent requirements or where no national level existed. This was seen to be a substantially positive response and, therefore, should not be indicated as a non-acceptance of the MRLs.

29. The Committee agreed that a re-examination of the forms of acceptance would be timely.

(b) Reports by Delegations

30. The observer from the EEC reported that the EEC had not been able to give formal acceptance to Codex MRLs, but had indicated that foods in conformity with them would usually be allowed free entry and distribution. In May 1985 the Director-General of FAO had requested the President of the Commission of the European Communities to establish means whereby formal acceptance could be given to Codex recommendations. On this basis a proposal was under discussion by the Codex Committee on General Principles which should allow the EEC to give formal acceptance of Codex MRLs.

31. The Delegation of Czechoslovakia stated that it was studying acceptances of the MRLs in Codex Vol. XIII and Supplement for a reply in 1990.

32. The delegations of The Netherlands, Spain and the United Kingdom noted that regulations were under preparation based on recent EEC Directives, and on Codex MRLs in some additional cases. On this basis the delegation of the United Kingdom expected several Codex MRLs to be applicable in the near future.

33. The Committee expressed its appreciation for the efforts of those countries which had indicated their acceptance of its MRLs. It was hoped that its efforts in providing guidance on the regulatory principles for acceptance would increase the number of positive notifications to the Secretariat.

INTAKE OF PESTICIDE RESIDUES AND CERTAIN ENVIRONMENTAL CONTAMINANTS

(a) Report on Pesticide Residue and PCB Intake Studies through the Joint FAO/WHO/UNEP Food Contamination Monitoring Programme

34. In the most recent 1984-1985 data collection cycle, four countries submitted information to GEMS/Food on the dietary intake of pesticide residues and PCBs: Guatemala, Japan, the United Kingdom and the United States of America.

35. Of the organochlorine pesticides studied, the highest intakes were reported for aldrin and dieldrin. Nevertheless, the reported 90th percentile intake values were less than 50% of the ADI. Intakes of the remaining organochlorine pesticides as well as organophosphorus pesticides studied did not exceed 2% of their respective ADIs, even at the 90th percentile level.

36. The highest daily intakes of HCB and total HCH amounted to 0.01 and 0.08 µg/kg body weight, respectively.

37. For PCBs, the highest values were reported by Japan with a mean daily intake of 0.04 µg/kg body weight and a 90th percentile value of 0.07 µg/kg body weight.

38. Estimates of intakes from concentrations of pesticides and PCBs found in human milk indicated that the intake of infants on a kg body weight basis may be two orders of magnitude higher than for adults.

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

39. The Committee was informed that Australia had recently published the outcome of a market basket survey, which was carried out in 1985. The levels found were again well below the respective ADIs. This survey was provided for the information of delegates.

40. The Netherlands presented, in Room document 9, information on organochlorine compounds and PCBs in human tissues from Dutch citizens (adipose, milk and blood). Residues of total PCBs in human milk (determined as decachlorobiphenyl) were comparable to residues calculated from the individual congeners. In the same document residues in grain samples imported into The Netherlands were presented. Only for inorganic bromide in rice were residues repeatedly found above the legal limits. The document also contained information on the daily intakes of pesticides and PCBs, both calculated from investigations in 24-hour duplicate portions as well as measured in a market basket study. Compared with the situation in the USA, significantly more elevated residues of PCBs were found. Also, residues for propham and chlorpropham were significant, and the origin of the contamination with pentachlorophenol could not be explained. In general, residues were far below the respective ADIs.

41. The delegation of Canada announced the completion of a total diet study in July 1988. The results will be made available to the CCPR.

(c) Report of an FAO/WHO Consultation on Pesticide Residues Intake

42. As early as 1985, CCPR felt that in order to facilitate acceptance of Codex MRLs, there was a need to predict pesticide residue intake to provide some assurance that Codex MRLs would not result in intakes that may exceed the ADI of a pesticide. After extensive reviews, the ad hoc Working Group on Regulatory Principles finalized a discussion paper "Codex Limits for Pesticide Residues in Food and Consumer Safety" (CX/PR 86/12, February 1986). The concepts in this paper were further developed by a WHO consultant, Mr. R.D. Schmitt, US Environmental Protection Agency, in the document "Guidelines for Predicting Potential Dietary Exposure to Pesticide Residues". This document was considered twice by the CCPR as well as JMPR and revised in the light of comments. CCPR at its last Session further recommended that a consultation be convened to finalize these Guidelines.

43. In response to this recommendation, a Joint FAO/WHO Consultation was held in Geneva, October 1987, with representation from CCPR and GIFAP.

44. Mr. A.L. Black (Australia), Chairman of the Joint FAO/WHO Consultation presented the technical content of the Guidelines and recommendations of the Consultation. The procedures described in the Guidelines start with the most exaggerated intake predictions and proceed towards more and more realistic ones through the progressive use of the Theoretical Maximum Daily Intake (TMDI), Estimated Maximum Daily Intake (EMDI) and Estimate of Daily Intake (EDI) predictions. The Consultation made several recommendations including that predictions of TMDI and where necessary, of EMDI, be undertaken by FAO/WHO in collaboration with the JMPR and be published in the JMPR Reports and Evaluations. Appropriate data for EDI calculations are not always available internationally; thus, they would normally be undertaken at the national level.

45. The WHO representative informed the Committee that work is being initiated to develop a hypothetical global diet to be used in TMDI calculations and several "cultural" diets suitable for EMDI calculations for use by future Sessions of JMPR.

46. The Committee noted that, while TMDI and EMDI information would become available in reports of the JMPR, it would be useful for EDI information to be also available. It was agreed that countries should report their experiences using the Guidelines, including EDI information, to the CCPR. In this way the EDI information would be made available to interested parties.

47. The finalized Guidelines and report of the Consultation were made available to all participants of this Session of CCPR and were discussed by the ad hoc Working Group on Regulatory Principles. See para 243 for that discussion and the Committee's recommendation for the finalized Guidelines.

CONSIDERATION OF THE FURTHER DEVELOPMENT OF THE CODEX CLASSIFICATION OF FOODS AND ANIMAL FEEDS (CAC/PR 4-1988)

48. The Committee discussed Room Document 8 on this subject, introduced by Mr. A.F.H. Besemer who expressed his thanks for helpful comments he had received. It was noted that several new commodity numbers had been inserted, including the group covering milk products (for pesticides which were not fat-soluble).
No specific commodities were listed in the milk products group, but provision was made to accommodate them if necessary.
Mr. Besemer informed the Committee that most of the 2-3,000 pesticide-commodity combinations had now been tranferred to the new classification, but some problems remained which could only be resolved by consultation of the original data at FAO. Attention was drawn to the following specific items.

Fruits, vegetables (with or without qualification)

49. Several MRLs existed for these broad groups.
Mr. Besemer suggested that it would be useful to seek the opinion of the Ad-Hoc Working Group on Priorities as to whether some of the older MRLs were relevant to current GAP. It was agreed that the Secretariat should request governments, by means of a Circular Letter, to indicate whether they had interest in retaining specified MRLs for such broad commodity groups.

CXLs for malathion (049) in collards and kale at different levels

50. Examination of the original data had shown that it was appropriate to retain only the CXL for kale.

Parathion-methyl (059) in "Other fruit"

51. Although the CXL referred to "other fruit" there were no recommendations for specified fruits. It was, therefore, proposed that the commodity name should be changed to "fruit". It was noted however that data on both parathion-methyl and parathion were of doubtful validity and a review was needed.

Deltamethrin (135) in "Fruiting vegetables, edible peel"

52. This group of commodities had been replaced by 'Fruiting vegetables, cucurbits' and 'Fruiting vegetables, other than cucurbits'. Mr. Besemer invited the Committee to endorse his opinion that the available data would support MRLs for deltamethrin in both these groups at the same level (see para 138).

Inorganic bromide (047) in fruit and various dries fruits

53. The recommendations referred to post-harvest uses, but the data did not reflect current practice. Inorganic bromide was on the agenda of the forthcomming JMPR, which should be asked to re-examine the data.

Kiwi fruit

54. The Committee was informed by the delegation of New Zealand that the commodity was "kiwifruit". The Committee took note of this information and agreed to adopt this nomenclature.

Wine and Grapes

55. The suggestion was made that wine should be included in the classification, and that table grapes should be differentiated from wine grapes. Mr. Besemer undertook to consider these items, but pointed out that it was often not clear whether available data referred to wine or table grapes.

Group MRLs

56. The Committee was informed that several countries had systems for combining commodities when establishing group MRLs, and expressed the opinion (1) that it would be helpful to the JMPR if countries indicated the basis of such group limits and (2) that the JMPR should similarly indicate the considerations on which its estimations of group MRLs were based.

Acceptance of the Classification

57. In concluding the discussion of this item the Chairman noted that the Classification had received wide acceptance, notably by JMPR and by the EEC in developing its Directives on residues, and thanked Mr. Besemer for the great contribution he had made to the work of the CCPR. The Committee endorsed the Classification and proposed its publication as a Codex document.

CONSIDERATION OF MAXIMUM RESIDUE LIMITS

58. The Committee had before it the following documents:

- CX/PR 88/2 and Add. 1 containing MRLs at Step 6
- CAC/PR 2 1988 containing Part 2 of the "Guide to Codex Recommendations Concerning Pesticide Residues" in which MRLs are listed.
- CX/PR 88/7 containing government comments on the MRLs under discussion.

The Committee, at its 18th Session, decided to subdivide Step 7 into 7A, 7B and 7C as follows:

- 7A is 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 is 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 is used for compounds or proposals on which action by the Committee is contingent upon further developments.
- "(a)" following Step numbers means that the MRL is a proposed amendment to a Codex MRL (CXL).

In the interest of economy the following paragraphs refer only to those MRLs and ERLs on which there was detailed discussion, where delegations 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 of 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".

Commodity description for milk

59. The Committee noted that the proposed change of the commodity description "milk" to "milks" did not change the scope of the CXLs affected and agreed that the amendment could be regarded as non-substantial.

BROMOPHOS (004)

60. The Committee agreed that the residue should be described as fat-soluble.

CAPTAN (007)

Cherries; Potatoes

61. The Committee noted that captan was on the agenda of the 1990 JMPR and agreed that the proposals should remain at Step 7 C.

Status of MRLs

At Step 7C: cherries, potato

CARBARYL (008)

Cattle meat; Goat meat; Sheep meat

62. The Committee noted that the qualification '(fat)' had been introduced in error and should be deleted.

CARBOPHENOTHION (011)

63. The Committee agreed that the residue should be described as fat-soluble.

CHLORDIMEFORM (013)

64. The Committee noted that the 1987 JMPR had withdrawn the temporary ADI with the recommendation that it should not be used where its residues could arise in food, and requested the Commission to delete the CXLs. They would not be replaced by GLs.

CHLORPYRIFOS(017)

Dried grapes

65. The suggestion was made that the proposal of 2 mg/kg was unnecessarily high, but the Committee noted that the MRL should be consistent with that for grapes. After re-examination of the available data, the Committee concluded that delegations should be invited to supply additional information to the JMPR.

Status of MRLs

At Step 7C: dried grapes (currants, sultanas and raisins).

Poultry fat

66. The Committee noted that the recommendation of the 1975 JMPR was for 'fat of chicken' and agreed to change the commodity description accordingly.

2,4-D (020)

Maize; Rice; Sorghum

67. The United States of America could not support the current 0.02 mg/kg limit and questioned whether it should be retained, since it was not based on data for these grains. The delegation of the USA indicated that its present use pattern required a limit of 0.5 mg/kg. The delegation could not promise to provide the limited data currently available. Additional studies will be required if US uses are retained. The delegation of The Netherlands suggested that the limit of determination in these crops should be regarded as 0.05 mg/kg.

Status of MRLs

At Step 7C: maize; rice; sorghum.

DIAZINON (022)

Meat of cattle, pigs and sheep

68. The Committee noted that the 1970 JMPR had proposed a limit of 2 mg/kg, but this had been incorrectly recorded as 0.7 mg/kg. As none of the delegations indicated a need for the higher limit, the Committee agreed to maintain the CXL at its present level.

DIMETHOATE (027)

69. Several delegations expressed reservations against limits above 1 mg/kg. The EEC was adopting several limits, the highest being 1 mg/kg and a higher limit would be unacceptable to members of the Community. The United States of America stated that it needed 2 mg/kg for combined residues of dimethoate and omethoate for some commodities and proposed that the MRL indicate, if possible, which chemicals and GAP were the basis for limits for formothion, dimethoate and omethoate.
The United States noted that recommended Codex MRLs for dimethoate and omethoate should be considered in light of differences in their respective toxicology data bases which had been used by the JMPR in support of separate ADIs for these two pesticides.

70. The manufacturer and the delegation of Chile both undertook to supply relevant residue data to the JMPR, and the Committee agreed to await the JMPR evaluation.

Status of MRLs

At Step 7B: all proposals.

ENDOSULFAN (032)

71. The Committee noted that the compound was due for review by the 1989 JMPR.

Status of MRLs

At Step 7B: meat; milks.

FENITROTHION (037)

Wheat flour

72. Although several delegations expressed the opinion that the post-harvest use of fenitrothion as a grain protectant was not GAP, because, in their opinion, it resulted in a relatively high residue in foods ready for consumption, the Committee was informed that this was an important registered use in Australia.
It was pointed out that the application rate is up to 10 mg/kg; however residues in cereal grains exported after storage were normally much lower. Data would be provided to show that the proposed MRL of 3 mg/kg in flour is consistent with this practice.
The Committee agreed to await the review of promised data by the JMPR, noting that the review might necessitate amendment of the CXL for cereal grains.

Status of MRLs

At Step 7C(a): wheat flour.

FENTHION (039)

73. The Committee agreed that the residue should be described as fat-soluble.

HEPTACHLOR (043)

Pineapple

74. The Committee noted the recommendation of the 1987 JMPR and proposed the deletion of the qualification "(in the edible portion)" as a non-substantial amendment to the CXL.

INORGANIC BROMIDE (047)

75. The Committee took note of the reservations received in writing. It also noted that inorganic bromide would be reviewed by the 1988 JMPR, and that it would, therefore, be appropriate to review the MRLs at the next session of CCPR.

Status of MRLs

At Step 3 : celery

At Step 7B: cabbages, head; cucumber; lettuce, head; tomato

MALATHION (049)

76. The Committee agreed to request the Commission to delete the existing Codex MRL for collards, as this was covered by the MRL for kale.

OMETHOATE (055)

77. The Committee recalled the discussion of dimethoate (027) and noted that similar considerations applied (see paras 69 and 70).

Status of MRLs

At Step 7B: all proposals.

ORTHO-PHENYLPHENOL (056)

Melons

78. Information was requested on residue data on melons as a whole commodity.

PARAQUAT (057)

Soya bean (dry)

79. As there was no new information available the proposal was kept at Step 7C.

Status of MRLs

At Step 7C(a): soya bean (dry).

TRICHLORFON (066)

Bananas (pulp)

80. The Committee agreed to delete bananas (pulp) in view of the existence of a proposal for banana.

Status of MRLs

At Step 5/8: banana.

CYHEXATIN (067)

81. The Committee noted that the original manufacturer had ceased production of cyhexatin for reasons of toxicity and recommended that cyhexatin be submitted to the JMPR for toxicological re-evaluation. The delegation of the Netherlands, supported by several other delegations, proposed that azocyclotin be re-evaluated at the same time.

The manufacturer's representative stated that new data on azocyclotin would not be available before the end of 1988.

The Committee agreed that it would be desirable that cyhexatin was reviewed by the 1988 JMPR if possible, as the next Commission's Session will be in 1989.

Status of MRLs

At Step 7B: common bean; kiwi fruit; peach; plums (including prunes); strawberry.

CARBENDAZIM (072)

82. The Chairman drew the attention of the Committee to some general reservations against the proposed MRLs for this compound, expressed by several delegations in their written comments. The basis for reservations included: (a) discussion of the figures should be postponed until the JMPR had completed its review of all residue data from use of benomyl, carbendazim and thiophanate-methyl, scheduled for 1988; (b) disagreement with the residue definition; and (c) concern over the toxicity of the compound.
The Committee concluded that the JMPR in its 1988 meeting should consider these problems.

Apple, Pear

83. The delegations of France and Italy said that registered uses in their country permitted an MRL of 2 mg/kg; they expressed their reservation against the proposed figures which are based on post-harvest treatments.

Citrus

84. In relation to the low ADI for carbendazim, the proposed (elevated) MRLs for e.g. citrus fruits could not be accepted by the delegation of Austria.

Status of MRLs
At Step 7B : all proposals.

VAMIDOTHION (078)

85. The Committee noted the statements of a number of countries which expressed general concern at the toxicity of this substance, and several delegations expressed the view that an estimation of intake would be needed as an integral part of the evaluation which would occur later in 1988, when new data would be available to JMPR. The proposals were retained at Step 7B pending re-evaluation.

Status of MRLs
At Step 7B: cereal grains; grapes; peach; pome fruits; rice, husked; sugar beet

CHINOMETHIONAT (080)

86. The proposed MRLs were advanced to Step 8 for adoption by the Commission.

Status of MRLs
At Step 8: melons, except watermelon; persimmon, Japanese; strawberry; watermelon

CHLOROTHALONIL (081)

87. It was noted that this substance was to be evaluated by JMPR in 1988. The proposed MRL for grapes was retained at Step 7B.

Status of MRLs
At Step 7A: banana; cereal grains
At Step 7B: grapes

DICHLOFLUANID (082)

Hops, dried

88. The Committee noted that this product was no longer used on hops, and recalled that the 1985 JMPR had recommended the withdrawal of the MRL for this purpose. The Committee agreed to recommend that the Commission delete the CXL for dried hops.

DICLORAN (083)

89. The Committee agreed to include two MRLs proposed by the 1977 JMPR which had been inadvertently omitted from the list of CXLs.

Status of MRLs
At Step 3: onions 20 mg/kg
witloof chicory 1 mg/kg

PIRIMIPHOS-METHYL (086)

90. Several delegations recommended that an estimate of the dietary intake be undertaken, especially because of the post-harvest use on cereals.

Citrus fruits

91. The delegation of France proposed that a separate MRL be established for mandarins at 2 mg/kg, with 1 mg/kg for other citrus fruit, in view of the large surface area/volume ratio of these small fruits. This proposal was not accepted by the Committee.

Dried fish

92. The delegation of the United Kingdom stated that the proposed MRL of 10 mg/kg was intended to provide for application to fish before drying in wet, tropical and sub-tropical climates, to prevent blow-fly infestation. Other delegations suggested that GAP for this purpose would result in residues of about 5 mg/kg.
After consultation of the relevant Evaluations, it was concluded that 8 mg/kg was the appropriate limit.

Peanut oil, crude

93. The Committee advanced the MRL of 15 mg/kg to Step 8, but in doing so noted that edible peanut oil (OR 0697) was not covered by this decision.
It recalled that the data available at the time of evaluation allowed an MRL of 15 mg/kg to be estimated for this commodity and agreed to send this MRL for comments at Step 3.

Status of MRLs
At Step 3 : peanut oil, edible
At Step 8(a): citrus fruits; peanut oil, crude
At Step 8 : dried fish

CHLORPYRIFOS-METHYL (090)

93A. The Committee agreed that the residue should be described as fat-soluble.

METHOMYL (094)

94. Several delegations expressed reservation with regard to a number of the proposals. In their opinion, a critical re-evaluation of the residue data, which had been evaluated by the 1975 JMPR, would result in lower MRLs for many of the commodities. The United States of America indicated that its GAP required limits at the proposed MRL levels for several commodities. It was agreed that the MRLs for the commodities listed below at Step 7B should be reviewed by JMPR, if possible, in 1988.

Apples; Grapes; Hops, dry

95. The delegation of the United States of America could not support the proposals for these commodities and undertook to have data provided to support increases in the proposals.

Citrus

96. It was decided that the specific varieties listed in parentheses could be deleted as a non-substantive amendment.

Cauliflower; Cucumber; Egg plant; Sorghum forage (green)

97. The Committee decided to amend the MRL for cauliflower to 2 mg/kg; for cucumber and egg plant to 0,2 mg/kg, and for sorghum forage (green) to 1 mg/kg. The United States of America did not support the limit for barley, oats and wheat, but did support 1 mg/kg based on data already provided.

Status of MRLs
Step 7B: apple; barley; barley straw and fodder, dry; cabbages, head; celery; citrus fruits; grapes; hops, dry; lettuce, head; nectarine; oats; oatstraw and fodder, dry; peach; tomato; wheat; wheat straw and fodder, dry
Step 7A: all other proposals

ACEPHATE (095)

98. The Committee agreed that government comments should be sought on the proposed MRLs in the light of the MRLs for methamidophos (100), which is a metabolite of acephate (see para 99).

Status of MRLs
At Step 6: all proposals

METHAMIDOPHOS (100)

99. The Committee agreed that government comments should be sought on the proposed MRLs in the light of the MRLs for acephate (095) which is the parent compound of methamidophos (see para 98).

Status of MRLs
At Step 6: all proposals

MALEIC HYDRAZIDE (102)

Onion, bulb; Potato

100. The Committee agreed that reference to post-harvest use for these Codex MRLs should not be included. The opinion was expressed that application in the field for protection of the commodity during storage was equivalent to post-harvest treatment.

PHOSMET (103)

Toxicological Evaluation

101. The delegation of the Federal Republic of Germany indicated that it had data showing evidence of adverse toxiceffects (oncogencity). It was agreed that any completed studies should be submitted to the JMPR for evaluation, when they become available and if they raise questions of safety.

Feijoa

102. As the MRL was uncontroversial the Committee decided to recommend the omission of Steps 6 and 7.

Maize; Sweet Corn (Corn-on-the-cob)

103. The delegation of the Netherlands was of the opinion that data in the 1986 Evaluations supported an MRL of 0.05 mg/kg rather than 0.5 mg/kg proposed by the JMPR. It was agreed to refer the matter to the JMPR for clarification.

Status of MRLs
Step 5/8 : feijoa
Step 7B(a): maize; sweet corn (corn-on-the-cob)

DITHIOCARBAMATES (105)

Lettuce

104. Several delegations indicated that the level of 5 mg/kg was unnecessarily high. Other delegations were of the opinion that the level proposed by the JMPR was appropriate. It was agreed not to change the limit.

Status of MRLs
Step 8: lettuce, head

ETHYLENETHIOUREA (ETU) (108)

105. The point was made by some delegations that the data on which the temporary MRL for common bean was based were rather old and that the toxicological clearance of ETU was only temporary. The Committee discussed whether the limits proposed for ETU should not be combined with those for dithiocarbamates since ETU was an impurity of the ethylene bisdithiocarbamates and since additional amounts formed from these pesticides following application. It was noted the ETU also formed during cooking or processing from ethylene bisdithiocarbamates, which complicated matters. The question arose whether the limits should be deleted or included under the dithiocarbamates (105).

106. The representative of the manufacturer indicated that new data were available. It was noted that the FAO specifications for ethylenebisdithiocarbamates included a limit for ETU. It was suggested that an approach such as that followed with maleic hydrazide might be appropriate. The Committee referred the question to the JMPR (MRLs kept at Step 7B).

IMAZALIL (110)

Post-harvest treatment

107. The Committee had a general discussion about the post-harvest use of imazalil. A number of countries considered such uses unacceptable in view of the rather high residues found. On the other hand, some producing countries indicated that long storage and transport under certain climatic conditions required this type of treatment, especially in view of resistance to many fungicides.

Cucumber; Melons, except Watermelon; Peppers; Tomato

108. Following information from the manufacturer, the Committee agreed to delete the proposed MRLs for cucumber, melons, tomato and peppers as these did not represent registered uses.

Pome fruits

109. The delegation of the United States of America stated that data supplied to the 1985 JMPR supported a 10 mg/kg limit. However, certain high residue data had not been taken into consideration. The Committee decided not to amend the proposed MRL.

Potato

110. The delegation of France indicated that the MRL would be acceptable only for seed potatoes. It was noted that a small proportion of seed potatoes was sold for human consumption. The question was raised whether seed potatoes should be considered a food commodity.

Strawberry

111. The delegation of Belgium indicated that data would be made available to the JMPR for strawberries based on a 3 day pre-harvest interval.

Status of MRLs

Deleted : cucumber (proposed amendment to the Codex MRL based on post-emergence use); melons, except watermelon; peppers; tomato
Step 6 : potato
Step 7B : strawberry
Step 8 : persimmon, Japanese; pome fruits; raspberries, red, black

PHORATE (112)

112. The Committee recalled its discussions at the 18th and 19th Sessions. It was noted that a Circular Letter requesting information on registered uses had been sent to Governments, but without success.

The Committee was informed by the manufacturer's representative that in addition to hops as discussed at the 18th and 19th Sessions, there were also no registered uses now on alfalfa, celery, cowpea, egg plant, grapes or lettuce. The Committee agreed to delete the MRLs for these commodities and to return all other commodities to Step 6.

Status of MRLs
Deleted : alfalfa fodder; celery; cowpea (dry): hops (dry); egg plant; grapes; lettuce, head.
At Step 6: all other commodities

PROPARGITE (113)

113. The Committee agreed that the residue should be described as fat-soluble.

ALDICARB (117)

114. The Committee noted that aldicarb was on the agenda of the 1988 JMPR.

Status of MRLs
At Step 7B: citrus fruits; maize forage

CYPERMETHRIN (118)

Berries and other small fruits

115. The Committee was informed that data were being submitted to the 1988 JMPR.

Milks

116. It was suggested that the data reviewed by the 1986 JMPR did not support the proposed MRL.
After examination of the available data, the Committee agreed to advance the proposal.

Status of MRLs
At Step 7B : berries and other small fruits
At Step 8(a): milks

FENVALERATE (119)

Brussels sprouts

117. The Committee was informed that new data had been submitted to the JMPR in February of 1988.

Cabbages, Head

118. Several delegations considered the proposal to be too high, whereas the delegation of the United States of America had a national MRL of 10 mg/kg. The United States of America stated that it would consider a 5 mg/kg limit at an appropriate time, but was not likely to be able to accept 3 mg/kg. After consideration of the available data, the Committee agreed to return a figure of 3 mg/kg to Step 6.

Edible offal (Mammalian)

119. The delegation of the United States of America believed that the MRL for meat fat, 1 mg/kg, implied that a higher limit was required for edible offal. The Committee noted, however, that the JMPR had reconsidered the current proposal in 1987 and concluded that it should be maintained.

Status of MRLs
At Step 6 : cabbages, head
At Step 7B: Brussels sprouts
At Step 8 : edible offal, mammalian; peas, shelled

PERMETHRIN (120)

120. The Chairman informed the Committee that the Commission had intended to return only the proposal for head lettuce to Step 7, but the report of the 17th Session incorrectly recorded that all the proposals at Step 8 had been returned. Several of the proposals could, therefore, once more be advanced to Step 8.

Cattle, Edible offal of; Pig, Edible offal of; Sheep, Edible offal of

121. The Committee noted that the proposals for pig and sheep should be deleted, in view of the proposal for Edible offal (Mammalian). The Commission would be requested to delete the Codex MRL for cattle.

Lettuce, Head

122. The discussion at the last Session of the Committee was recalled, and the Committee agreed to return the proposal to Step 6 for further comment.

Tomato

123. The Committee was informed by the delegation of Mexico that additional data had been sent in 1986 to the JMPR for evaluation. It was agreed that the evaluation should be carried out by the 1988 JMPR.

Wheat bran

124. The delegation of Australia informed the Committee that commercial scale trials were underway this year and that the data would be available in the 1989 JMPR.

Intake of permethrin

125. The delegation of Austria requested that the JMPR should provide estimates of dietary intake for permethrin. The WHO Joint Secretary agreed to calculate TMDIs and EMDIs at the earliest opportunity (see para 44).

Status of MRLs

Deleted : edible offal of pig, sheep (cattle: see para 121)
At Step 6 : lettuce, head
At Step 7B : tomato
At Step 7C : wheat bran, unprocessed; wheat flour; wheat wholemeal
At Step 8 : celery; common bean; milks; peanut; pistachio nut; sorghum straw and fodder, dry; soya bean (dry); spinach; spring onion
At Step 8(a): edible offal (mammalian); meat

ETRIMFOS (123)

126. The Committee expressed the view that the limit of determination (0.01 mg/kg) for several commodities was too low to be easily attainable in regulatory laboratories. This was also recognized by the 1987 JMPR which had concluded that the residue should preferably be based on the parent compound only. To enable this to be done a review of all data would be necessary and, therefore, the JMPR postponed the complete review to a future meeting. The information on GAP requested by the 1982 JMPR would also be included.
The figures for grapes, kale and onions were considered to be higher than necessary and should be referred to the JMPR for review. It was noted that there was a need for more data on residue levels in apricots, artichokes, Brussels sprouts, peaches and potatoes. Governments and manufacturers were requested to submit any residues data available based on current GAP to the JMPR.

Status of MRLs

At Step 7B: all proposals previously at Step 6
At Step 7C : all proposals previously at Step 7C

Grapes; Peppers, Sweet; Raspberries, Red, Black

134. The Committee agreed to ask the JMPR to review the proposed figures. Available data should allow for a lower MRL for grapes and raspberries than proposed. The group MRL for fruiting vegetables should be sufficient to cover sweet peppers.

Sugar beet leaves or tops

135. The delegation of The Netherlands pointed out that there seemed to be an inconsistency between the proposed MRL for this commodity (0.2 mg/kg) and that for fodder beet leaves or tops (0.1 mg/kg) and, therefore, had strong reservations. The delegation of the United States of America, however, stated that in that country there was a registered use with a limit to that level.

Status of MRLs

At Step 6 : grapes; peppers; sweet; raspberries, red, black

At Step 7B: barley; barley straw and fodder, dry; oats; oat straw and fodder, dry; rye: rye straw and fodder, dry; wheat; wheat straw and fodder, dry

At Step 8 : all other proposals.

DELTAMETHRIN (135)

Beans, dry; Lentil (dry)

136. The Committee was informed that there were registered uses on lentils in Spain and on beans in some northern African countries; the delegation of The Netherlands withdrew its reservation. The delegation of the Federal Republic of Germany expressed a reservation because it had not received all the data.

Brassica (cole or cabbage) vegetables, Head cabbages, Flowerhead brassicas

137. There was some question regarding the proposed figure. As the compound was on the agenda for the 1988 JMPR, the Committee decided to request a review. The manufacturer and countries were encouraged to provide residue data.

Fruiting vegetables - edible peel

138. Although the MRL for these commodities was already at Step 8, it was felt by the Committee that a correction should be made in the description, in line with what had been done with other compounds. This would result in MRLs for two commodities instead of one.

Oilseed

139. The Committee decided to delete the term "Po" after the MRL for this commodity, as data were based on pre-harvest-use.

Olives

140. The delegation of Italy would provide new data to JMPR, as this delegation was of the opinion that a figure of 0.5 mg/kg was sufficient.

Wheat bran, unprocessed; Wheat flour; Wheat wholemeal

141. The delegations of France and Australia were of the opinion that the proposed MRL (2 mg/kg) for unprocessed wheat bran was too low, and that at least 3 mg/kg was necessary.
The manufacturer would provide new data on this aspect, which would indicate that 3 mg/kg should be the right figure. Because of the relation between this commodity, wheat flour and wheat wholemeal, it was decided that all three commodities should stay at Step 6, awaiting the JMPR's opinion.

MECARBAM (124)

127. The Committee advanced all proposals to Step 8.

Status of MRLs
At Step 8: all proposals.

METHACRIFOS (125)

128. The Committee agreed to describe the residue as fat soluble.
The Committee agreed to keep all proposals at Step 7B, awaiting the toxicological review of this compound by the 1988 JMPR.

Status of MRLs
Step 7B: all proposals.

PHENOTHRIN (127)

129. The Committee was informed by the delegation of Australia that new residue data would be made available to the JMPR for evaluation.

Status of MRLs
At Step 7B: all proposals.

PHENTHOATE (128)

130. The Committee agreed to describe the residue as fat soluble.

AZOCYCLOTIN (129)

131. The Committee agreed to proceed in the same manner as in the case of cyhexatin (see para 81).
The representative of the manufacturer informed the Committee that new toxicological information on azocyclotin would be available for the 1989 JMPR.

Status of MRLs
Step 7B: all proposals.

ISOFENPHOS (131)

131A. The Committee agreed to describe the residue as fat soluble.

METHIOCARB (132)

Citrus fruits; Sweet corn (corn-on-the-cob); Sugar beet

132. The 1987 JMPR had proposed deletion of a number of proposals for this compound in the absence of information on registered use. The United States of America stated that use on citrus and sweet corn were registered in their country. The Committee agreed to these proposed deletions with the exception of those for citrus fruits, sweet corn (corn-on-the-cob) and sugarbeet. Use on sugar beets was registered in The Netherlands.

Status of MRLs

Deleted	: common bean; Lima bean; maize; plums (including prunes); radish, Japanese; rice in the husk; sorghum; strawberry; tomato
At Step 5/8:	cereal grains; rape seed
At Step 8	: broccoli; Brussels sprouts; citrus fruit; lettuce, head; lettuce, leaf; sweet corn (corn-on-the-cob)

TRIADIMEFON (133)

Barley; Barley straw and fodder, dry; Oats; Oatstraw and fodder, dry; Rye; Rye straw and fodder, dry; Wheat, Wheat straw and fodder, dry

133. Several delegations were of the opinion that the proposals were based on pre-harvest intervals that were considerably shorter than those currently registered. The Committee requested the JMPR to reconsider the proposals.

Status of MRLs

At Step 3	: beans (dry); field pea (dry); lentil (dry):
At Step 3(a)	: olives
At Step 5/8(a)	: fig
At Step 6	: brassica (cole or cabbage) vegetables, head cabbages, flowerhead brassicas; cereal grains; wheat bran, unprocessed; wheat flour; wheat wholemeal
At Step 8	: fruiting vegetables, cucurbits; fruiting vegetables, other than cucurbits

BENDIOCARB (137)

142. The Chairman drew the attention of the Committee to footnote 1), stating that all MRLs except those for maize, sugar beets, maize fodder and forage, sugar beet tops and potatoes were regarded as temporary by the JMPR until the required information on nationally approved agricultural practices was provided. They had all, however, been adopted as Codex MRLs.

The Committee requested that the information be provided for evaluation by the next Session of JMPR in 1988.

METALAXYL (138)

Asparagus, Peanut

143. As there were no objections to these proposals, the Commission was requested to omit Steps 6 and 7.

Avocado; Broccoli; Brussel sprouts; Cabbages, Head; Cauliflower; Lettuce, Head; Spinach

144. The proposals were kept at Step 7B to await review by the JMPR in the light of data requested by the 1987 Joint Meeting, taking into account the actual use patterns. The manufacturer undertook to provide data on lettuce, head and spinach and possibly also other commodities.

Cucumber; Gherkin

145. The delegation of The Netherlands considered that all residues shown in the JMPR evaluations which reflected GAP could be accomodated by an MRL of 0.2 mg/kg. After re-examination of the evaluations the Committee agreed to return the proposal of 0.5 mg/kg to Step 6.

Grapes

146. Several delegations expressed the opinion that a lower MRL would be consistent with the data evaluated by the JMPR. After re-examination of the JMPR evaluations, the Committee agreed to return a limit of 1 mg/kg to Step 6.

Onion

147. The delegation of The Netherlands considered a limit of 0.05* mg/kg sufficient to accomodate residues in the bulbs as distinct from the whole plant. The United States of America supported 3 mg/kg based on total residue data already provided. The United States considered that these data were relevant, because it had been decided that for most commodities residues do not differ significantly whether determined as total residues or as parent compound . Further, the United States of America stated that the uses and data considered excessive by the 1986 JMPR were US GAP. The actual application rate of metalaxyl per se in the mixed formulation was 0.2 lb a.i./A.

Strawberry

148. The delegation of France hoped to provide data in support of a level of 0,5 mg/kg.

Status of MRLs
At Step 3 : cacao beans; carrot; raspberries, red, black
At Step 5/8: asparagus; peanut
At Step 6 : cucumber; gherkin; grapes; onion, bulb
At Step 7B : avocado; broccoli; Brussels sprouts; cabbages, head; cauliflower; lettuce, head; spinach
At Step 7C: strawberry
At Step 8 : apple; melons, except watermelon; peas; shelled; peppers; potato; soya beans (dry); squash, summer; watermelon; winter squash

PHOXIM (141)

149. The Committee agreed to describe the residue as fat soluble.

Lettuce; Sheep meat; Tomato

150. The Committee was informed by the manufacturer that new residue data for these commodities would be available in 1989.

Status of MRLs
At Step 7B: lettuce, head; sheep meat; tomato
At Step 8 : cattle meat; milks

PROCHLORAZ (142)

151. The delegation of France expressed a reservation on the toxicology of the compound which is under review in France. The delegation of the Netherlands thought the limit of determination unnecessarily high and this was referred to the JMPR.

Avocado

152. The delegation of the Federal Republic of Germany was of the opinion that the MRL was not acceptable because the JMPR evaluation would support a lower MRL. The matter was referred to the JMPR to review the available data.

Cattle, edible offal; Cattle fat; Cattle meat; Milks

153. The manufacturer's representative informed the Committee that new data would be available for the 1989 JMPR.

Citrus fruits

154. The Committee noted that there was a registered use on citrus fruits only in Israel; in other countries this use could not yet be accepted. Data will be made available to the JMPR as soon as possible.

Status of MRLs
At Step 7B: avocado; cattle, edible offal; cattle fat; cattle meat; citrus fruits; milks; papaya; stone fruit
At Step 8 : banana; barley; barley straw and fodder, dry; mango; mushrooms; oats; oat straw and fodder, dry; rye; rye straw and fodder, dry; wheat; wheat straw and fodder, dry.

TRIAZOPHOS (143)

155. The Committee noted that the temporary ADI of 0.0002 mg/kg body weight had been extended to 1990. In view of this low TADI, the Committee recommended that the future re-evalation should be accompanied by an estimate of intake in accordance with the UNEP/FAO/WHO Guidelines. The representative of GIFAP informed the Committee that new residue data on the crops listed would also be available at that time. The Committee agreed to retain all proposals at Step 7B until the toxicology of the substance had been re-evaluated.

Status of MRLs
At Step 7B: all proposals

BITERTANOL (144)

156. The Committee noted that all of the proposed MRLs were temporary, and would be considered by the 1988 JMPR. Additional data were expected to be submitted.

The delegation of the Netherlands referred to the proposed MRL of 2 mg/kg for apples, and drew attention to the fact that many countries applied an MRL of 1 mg/kg. It was agreed to refer this matter specifically to JMPR.

Status of MRLs
At Step 7B: all proposals.

CARBOSULFAN (145)

157. The delegation of France referred to the difficulty of obtaining reference standards for the metabolites included in the defined residue. The representative of GIFAP agreed to communicate this problem to the manufacturer.

Status of MRLs
At Step 7B: citrus fruits (temporary, pending new data)

CYHALOTHRIN (146)

158. The Committee noted the reservation of the Federal Republic of Germany with respect to the ADI allocated by JMPR, but was of the opinion that the interpretation provided by the Joint Meeting should continue to form the basis of the Committee's recommendations.

Status of MRLs
At Step 8: all proposals.

METHOPRENE (147)

159. It was noted that the residues arising from GAP were given temporary MRLs and would be re-evaluated by the 1988 JMPR. Nevertheless, the Committee noted that several of the proposed MRLs for cereals and related products referred to post-harvest uses which were not registered and agreed to delete these.

Status of MRLs
Deleted : bran (unprocessed) of cereal grain; cereal grains; wheat flour; wheat, wholemeal
At Step 7B: edible offal (mammalian); eggs (poultry); meat; peanut
At Step 8 : cattle milk; mushrooms

PROPAMOCARB (148)

160. The Committee was advised that new data were likely to be submitted to JMPR on cabbages and cauliflower in the near future, and agreed to await the Joint Meeting's evaluation of them.

Status of MRLs
At Step 7B: cabbages, head; cauliflower
At Step 8 : Brussels sprouts; celery; lettuce, head; peppers, sweet; radish; tomato.

ETHOPROPHOS (149)

161. The Committee agreed that all the proposals were acceptable.

Status of MRLs
At Step 5/8: all proposals.

DIMETHIPIN (151)

162. The Committee noted that the review of the temporary ADI was on the agenda for the 1988 JMPR. The delegation of The Netherlands suggested that MRLs should be developed for cotton seed oil, edible and for sunflower seed oil, edible, both at 0.02(*) mg/kg. This matter was referred to the JMPR.

Status of MRLs
At Step 3 : edible offal (mammalian); eggs (poultry): meat: milk of cattle, goats and sheep; poultry, edible offal of; poultry meat; sunflower seed oil, crude.
At Step 7A: cotton seed; linseed; potato; rape seed; sunflower seed.

FLUCYTHRINATE (152)

163. The Committee agreed to describe the residue as fat soluble.

164. The delegation of the Federal Republic of Germany informed the Committee of its general reservation on this compound because of concern with toxicity data. The representative of WHO was prepared to look at this matter if such a request would be made by the delegation.

Cabbages, head

165. The United States of America could not support 0.5 mg/kg, but did support 2 mg/kg based on data already provided, including the storage stability data. At the request of the delegation of the United States of America, the JMPR was asked to reconsider the level of 0.5 mg/kg in light of data on stability of the residue during storage.

Grapes

166. The delegation of France raised the question which type of grapes (table or wine) was covered by the MRL. As there seemed to be no international trade in wine grapes, the Committee was of the opinion that it should apply to table grapes.

Maize fodder; maize forage

167. It was agreed that the JMPR should re-evaluate the figures for maize fodder and maize forage, in the light of the storage stability data.

Status of MRLs
At Step 5 : maize fodder
At Step 5/8: cotton seed oil, crude; cotton seed oil, edible; maize; sweet corn (kernels)
At Step 7B : cabbages, head; cattle meat; cattle milk; eggs (poultry); goat meat; maize forage
At Step 8 : all other proposals.

THIODICARB (154)

168. The delegation of The Netherlands had doubts on including methomyl oxime in the residue definition, as the same has not been done for methomyl as a pesticide in its own right. It was stated moreover that adequate methods of analysis were available. The suggestion was made to reconsider both thiodicarb and methomyl together for a next evaluation by the JMPR, which would probably have an impact on the residue situation, e.g. for sweet corn. In the opinion of the delegation of the United States of America following a conclusion of the JMPR, the use of thiodicarb would not result in appreciable residues of the oxime metabolite. JMPR will be asked to study this matter.

Sweet corn (corn-on-the-cob)

169. The delegation of the United States of America had objections against the lowering of the figure from 2 mg/kg to 1 mg/kg as suggested by the JMPR. The delegation of the Netherlands indicated that the figure had been changed by the JMPR following a Netherlands'proposal. On a suggestion of the Chairman the Committee decided to change the MRL for sweet corn from 1 to 2 mg/kg.

Status of MRLs
At Step 8: all proposals.

BENALAXYL (155)

Grapes

170. The delegation of The Netherlands expressed its reservation with regard to the proposed limit of 0.5 mg/kg, which was based on the results of supervised trials of only one country (the Federal Republic of Germany), which use pattern does not yet reflect registration and, therefore, cannot be considered as GAP. The delegation of the Federal Republic of Germany was, upon request, not able to give a further explanation on this subject, but undertook to provide further information. The delegation of the United States of America informed the Committee that the use, in the Federal Republic, was not considered as GAP by the JMPR, and that in the United States of America a national MRL for grapes of 1 mg/kg was proposed. Several delegations informed the Committee on their nationally established MRLs for grapes; 0,1 mg/kg in France; 0,5 mg/kg in Italy, Spain and Australia. Data from Australian trials had been sent to the JMPR. The Chairman suggested re-evaluation of the figures to be carried out in one of the future meetings of the JMPR.

Potatoes

171. The delegation of The Netherlands had some doubts whether the limit of determination of 0.01* mg/kg is suitable for regulatory purposes for this commodity. The delegation of France, was also of the opinion that the limit of determination was rather low.

Hops, dry

172. The delegation of France preferred to establish a lower figure than proposed. If possible this delegation will provide new data to JMPR.

Peppers, sweet

173. The delegation of Spain requested to set the MRL at the same level as tomato, as the usage for both products should be the same. The manufacturer will provide data on that matter;in a Circular Letter countries will be requested to supply data.

Tomatoes

174. The delegation of The Netherlands informed the Committee that, in their opinion, more data are needed with regard to the residues from glasshouse uses at normal rate observing a pre-harvest interval of three days before the proposed MRL could be accepted.

Status of MRLs

At Step 5: grapes; hops, dry; peppers, sweet; potato; tomato
At Step 5/8: cucumber; melons, exept watermelon; onion, bulb

CLOFENTEZINE (156)

175. The delegation of Austria drew the attention of the Committee to a remark laid down in the written comments from the delegation of the Federal Republic of Germany, stating that for several of the crops listed, the product was not registered in any country. Upon a request of the Chairman on this matter, the manufacturer made clear that only two commodities - gooseberries and raspberries - were not registered in any country. The Committee decided to delete gooseberries and raspberries from the list.

Cattle milk

176. The delegation of The Netherlands proposed to convert the MRL for milk to 0.05* mg/kg, in accordance with the MRL for cattle meat, which was changed by the 1986 JMPR to 0.05* mg/kg. The delegate of the AOAC explained that 0.01* mg/kg had been established as the limit of determination by the JMPR.

Cattle, edible offal of

177. The delegation of Italy asked about the nature of the use of this compound justifying the proposed MRL of 0.1 mg/kg in this commodity.

Citrus fruits

178. The FAO secretariat informed the Committee that the proposed MRL had to be considered as temporary because the available data base is not sufficient. The representative of GIFAP undertook to provide information to the 1989 JMPR.

Grapes

179. To the opinion of the delegations of The Netherlands and France more information had to become available to support the proposed MRL of 0.2 mg/kg.

Status of MRLs

Deleted	: gooseberry; raspberry, Red, Black
At Step 3	: currants, black, red, white
At Step 5	: grapes
At Step 5/8	: eggs (poultry); poultry, edible offal of; poultry meat
At Step 7B	: citrus fruits; cucumber
At Step 8	: cattle meat; cattle, edible offal of; cattle milk; pome fruits; stone fruits; strawberries

GLYPHOSATE (158)

Barley; Oats

180. The delegation of Finland, supported by the delegation of Sweden, expressed its reservation against the proposed MRLs; the United States of America objected to exclusion of metabolites from the definition of the residue.

Kiwifruit

181. The delegation of the United States of America considered a 0.1 mg/kg limit of determination for **Kiwifruit** more practicable for regulatory laboratories. The Committee decided to ask the JMPR to look at this again.

Wheat

182. The delegation of Finland, supported by the delegation of Italy expressed its reservation against the proposed MRL.

Wheat bran, unprocessed

183. The delegation of The Netherlands was of the opinion that the data available to the JMPR warranted an MRL of 40 mg/kg instead of 50 mg/kg. The Committee decided to ask the JMPR to review the data.

Wheat flour; Wheat wholemeal

184. The Committee decided to ask the JMPR to review its data on wheat and wheat bran, unprocessed, with a view to recommending MRLs for the processed products.

Status of MRLs

At Step 3	: soya bean (dry); soya bean fodder; soya bean forage (green); wheat bran, unprocessed
At Step 5	: **Kiwifruit**
At Step 7C	: cattle meat; cattle milk; eggs (poultry); maize; pig meat; poultry meat; rice; sorghum; sweet corn (corn-on-the-cob)
At Step 8	: barley; beans (dry); cattle, edible offal of; cotton seed; hay or fodder (dry) of grasses; oats, peas (dry); pig, edible offal of; rape seed; soya bean (immature seeds); straw and fodder (dry) of cereal grains; wheat.

VINCLOZOLIN (159)

185. The Committee decided to describe the residue as: "sum of vinclozolin and all metabolites containing the 3,5-dichloroanaline moiety, expressed as vinclozolin".

The delegation of France informed the Committee that they where presently involved in the registration of a new compound clozolinate, which has the same metabolites and the same behaviour as vinclozolin and gives the same kind of residue, which would further complicate the situation with this compound and procymidone.

Apricot

186. The delegation of the United States of America stated that they have a national MRL of 25 mg/kg for stone fruits based on data that were available to the JMPR, but with a shorter PHI. The Committee was informed that new data for the compound will be available for the 1988 JMPR.

Kiwifruit

187. The delegation of Italy stated that GAP in that country justified an MRL of 3 mg/kg. The delegation of New Zealand said that their GAP justified the proposed MRL.

Lettuce, head; Peppers, sweet

188. The delegation of the United States of America informed the Committee that GAP in that country would require higher MRLs: 10 mg/kg for lettuce and 3 mg/kg for peppers. Data available to the 1986 JMPR and data supporting US tolerances support 10 mg/kg for lettuce, as does GAP, and data support 3 mg/kg for peppers, but were not taken into account. A 3 mg/kg limit for peppers was further supported by similar uses and a 3 mg/kg proposal for tomatoes. The Committee decided to ask the JMPR to review the data on these commodities.

Status of MRLs
At Step 3 : apricot; blueberries
At Step 7B: lettuce, head; peppers, sweet
At Step 7A: all other proposals.

PROPICONAZOLE (160)

189. The delegation of Canada, supported by the delegation of the United States of America, expressed their reservation on all proposals with regard to the residue definition, which consists of the parent compound only. The delegation of Canada noted that they were unable to accept the toxicological significance of the residue until the composition of the residue has been defined. The delegation of France reserved its position, since it had not been able to study the Evaluations.
The Committee decided to discuss, the residue definition at its next Session and asked for new residue data to be sent to the JMPR.

Cereal grains; rape seed

190. On the basis of data available to the JMPR, the delegation of the Netherlands indicated that MRLs of 0.05 mg/kg would be sufficient. The Committee decided to change the proposals to 0.05 mg/kg.

Status of MRLs
At Step 3: all proposals.

CONSIDERATION OF GUIDELINE LEVELS

Consideration of Guideline Levels

191. The Committee had before it the Guide to Codex Maximum Limits for Pesticide Residues - Part 3, the Index of pesticide chemicals for which guideline levels have been or may be set.

CARBON DISULPHIDE (009), CARBON TETRACHLORIDE (010), 1,2-DIBROMOETHANE (023), 1,2-DICHLOROETHANE (024), METHYL BROMIDE (052)

192. As these compounds are fumigants they where referred to that agenda item.

COUMAPHOS (018)

193. It was noted that the compound was on the agenda of the 1988 JMPR. The representative of GIFAP indicated that data where not available at the moment but would be available in 1989 for evaluation by the 1990 JMPR. The GLs were maintained.

DEMETON-S-METHYL (073)

194. The Committee noted that additional studies were in progress and would be available for the 1989 JMPR. The GLs were maintained.

DINOCAP (087)

195. It was noted that the compound was on the agenda of the 1988 JMPR. The representative of the manufacturer informed the Committee that the compound was under review in the United States of America, and that data would be made available for the 1989 JMPR.
The GLs were maintained.

SEC-BUTYLAMINE (089)

196. The Committee noted that there would be no additional toxicological data for evaluation by JMPR and agreed to delete all GLs from the Guide.

BIORESMETHRIN (093)

197. The representative of the manufacturer informed the Committee that toxicological studies to assess the compound were in progress and that the results would be made available in June 1990 for evaluation by the 1991 JMPR. The GLs were maintained.

DIALIFOS (098)

198. The representative of the manufacturer informed the Committee that toxicological investigations were in progress and would be available for the 1991 JMPR. The GLs were maintained.

DAMINOZIDE (104)

199. It was noted that the compound was on the agenda of the 1989 JMPR. The GLs were maintained.

ETHEPHON (106)

200. The representative of the manufacturer informed the Committee that the manufacturer was updating the toxicological package to conform with modern guidelines and that data would be made available for the 1991 JMPR. The GLs were maintained.

PROCYMIDONE (136)

201. The representative of the manufacturer informed the Committee that data would be made available in June 1988 for the 1989 JMPR. The GLs were maintained.

BUTOCARBOXIM (139)

202. It was noted that there were no data submitted for re-evaluation by the 1988 JMPR. The representative of GIFAP informed the Committee that the manufacturer was reviewing the status of the compound. The GLs were maintained and the Committee agreed to postpone consideration of this pesticide to the next Session.

PROPYLENETHIOUREA (PTU) (150)

203. The Committee agreed to await the evaluation of ETU by the 1988 JMPR before taking any action, noting that relevant PTU data would also be considered by the JMPR. The GLs were maintained.

PYRAZOPHOS (153)

204. The Committee noted that the results of long term studies would be available in 1990 for a re-evaluation by the 1991 JMPR. The GLs were maintained.

FUMIGANTS AND THEIR RESIDUES IN FOOD

205. The Committee discussed document CX/PR 88/10 - 'Fumigants - a Study of Residues in Food' and the comments on it contained in CX/PR 88/10 Add. 1 and Add. 2. The discussion was chaired by Mr. van der Kolk. After discussion, the Committee concluded that since the fumigation of soil and storage premises could give rise to residues in food, fumigants used for such purposes should be included in its considerations.

The Committee noted that several of the fumigants listed para 8 of CX/PR 88/10 were not currently used on food- or feedstuffs, in food storage premises or as soil fumigants and, therefore, did not need further consideration.

206. Mr. Van der Kolk pointed out that several countries had supplied extensive data, but the relative importance of the fumigants under discussion was not clear. He suggested, and the Committee agreed, that a delegation with particular interest in the subject should be asked to make a preliminary assessment of the data, which would be brought before the ad hoc Working Group on Priorities. The Working Group would introduce the fumigants in order of their importance into its Priority Lists for submission to the JMPR. The delegation of Israel agreed to undertake the preliminary assessment. Delegations were invited to send any available additional data to FAO during the next three months, for transmission to Israel.

207. In the course of discussing Addenda 1 and 2, it was noted that hydrogen phosphide was used as a fumigant in Australia, while 1,2-dibromoethane (ethylene dibromide) was no longer used on citrus fruit in the United States of America. The delegation of France undertook to send information to FAO on the French decree on fumigants, which included a list of national MRLs.
The Committee noted that an EEC Directive would prohibit the use of ethylene oxide in the Community after 1990.

In concluding the discussion, Mr. Van der Kolk thanked the delegation of Israel for the contribution it had undertaken to make to the work of the Committee.

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

208. The Committee had before it the report of the ad hoc Working Group on Methods of Analysis, which was introduced by its Chairman, Mr. P.A. Greve (The Netherlands). To the report, two appendices were attached, viz.:
- Annex I : Recommendations for Methods of Analysis (1988)
- Room document 10: Summary of the Answers to the Questionnaire sent out by the Working Group in 1987.

The report and the annexes were distributed to the Committee. Only the report it self is appended to this report.

209. Mr. Greve informed the Committee on the inquiry on "analytical methodology" and "good analytical practice", organised amongst laboratories involved in pesticide residue analysis, the outcome of which was laid down in Room document 10. The answers received (60 out of 100 questionnaires) formed a good cross-section of laboratories all over the world dealing with this subject. Answers were received on questions about:
- the number of samples investigated per year;
- the main pesticide/product combinations investigated;
- the methods of analysis used;
- the recovery (ranges) which were considered as acceptable;
- the concentration range between which recoveries have to be checked;
- the number of points used to construct a calibration curve;
- the repeatability;
- the reproducibility;
- the samples used for checking a method;
- the use of standard reference materials;
- the participation in external check programmes;
- the sources of the analytical pesticide standards used.

The answers to the questionnaire were used to review and update the Recommendations for Methods of Analysis, the 1988 version of which will be reviewed in the next Session of the CCPR, prior to publication.

Discussions by the Committee

210. The Committee discussed the difference between and the use of the concepts of "limit of determination" and "lower practical level" especially in relation to MRLs set "at or about the limit of determination" and in relation to the acceptability of residues. In this connection several delegations suggested that the Working Group should incorporate modern and more sensitive analytical methods in their recommendations. In this connection immunoassay methods were mentioned.

211. The delegations of the People's Republic of China and Egypt expressed the need for simplified and rapid analytical methods, including multiresidue methods, requiring simple laboratory equipment.

212. The Committee endorsed the conclusions included in the report of the Working Group (See APPENDIX III).

Appointment of an ad hoc Working Group on Methods of Analysis

213. The Committee thanked the Working Group and its Chairman for the work done prior 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 membership as listed in APPENDIX III with some additions.

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

214. The Committee had before it the report of the ad hoc Working Group on Development of Residues Data and Sampling. The report was introduced by Mr. N.F. Ives (USA), who substituted for the Chairman of the Group, Mr. J.A.R. Bates (United Kingdom). The report was distributed to the Committee, but is not appended to this report.

Guidelines on Pesticide Residues Trials for the Registration of Pesticides and the Establishment of MRLs
and
Guidelines on Studies to Provide Data on the Nature and Amount of Pesticide Residues in Certain Commodities of Animal Origin

215. The Committee was informed that both these Guidelines had been included in a single publication by FAO. The recommended changes concerning minimum sample sizes to be taken in supervised trials, as recommended by the 19th Session of the Committee (ALINORM 87/24A), would be incorporated in the next revision of this document. The representative of GIFAP reiterated the offer of that Organization to publish the revised Residues Guidelines.

Sampling for control purposes (enforcement of MRLs)

(a) Recommended Method of Sampling for the Determination of Pesticide Residues

216. The Committee was informed that only two countries (Finland and Thailand) had responded to the Circular Letter CL 87/40-PR) asking for comments on the Recommended Method of Sampling (published as Part 5 of the Codex Guide). A small subgroup had studied the problems raised by the delegation of Finland concerning the respective definitions of "lot" and "primary sample". The Working Group had agreed that the definition of a "lot" would be clarified by the addition of the note: "The identification of a lot would be greatly facilitated by the use of farmer and packer codes".
In the recommendation on taking a "primary sample" the phrase "as far as possible" should be replaced by "as far as practicable".
In the discussion that followed, the representative of FAO indicated that the above proposed minor changes would be brought to the attention of the Commission and included in the next revision of the document.

(b) Recommended Method of Sampling for the Determination of Pesticide Residues in Meat and Poultry Products for Control Purposes

217. The Committee was informed that this document had not yet been sent to governments for comments. The Working Group had recommended a combined publication of both documents (a) and (b) in part 5 of the Codex Guide. The Secretariat indicated that this could probably be done in 1989. With respect to the procedure that should be followed, the Secretariat explained that comments on document (b) would be requested from Governments and these would be considered with the help of Ms. M. Cordle (United States of America). A working paper will be prepared for the next Session of the CCPR including a revised sampling plan.

Guidelines for developing data on pesticide residues in food as consumed

218. The Committee was informed that this document (CX/PR 88/12) was a revised draft which took into account the views expressed by a number of countries in response to a Circular Letter. The document was attached to the report of the Working Group. In the opinion of the Group, information on the effects of preparation, processing and cooking on pesticide residues was vital in obtaining an accurate estimate of the dietary intake of pesticide residues.

219. In the light of the discussion that followed, it was decided that participants should be invited to send their comments on this document to the FAO Secretary of the JMPR and to Mr. J.A.R. Bates for consideration. The result of the consideration should then be handed over to the JMPR for further development. As the question of defining information required on the effects of processing was relevant to the Guidelines on Intake Estimates and to FAO work on registration requirements, the conclusions of the JMPR concerning this type of information might be better incorporated in the report of the JMPR and in other relevant publications.

220. The Committee thanked the Working Group and its Chairman for the work done prior to and during the Session. It was decided not to set up a new ad hoc Working Group in view of the small amount of work remaining and due to the wide interest sampling represented to the Committee. These aspects would be discussed in Plenary Session.

PESTICIDE RESIDUE PROBLEMS IN DEVELOPING COUNTRIES

221. The Chairman of the ad hoc Working Group on Pesticide Residue Problems in Developing Countries, Prof. Sakdiprayoon Deema (Thailand), presented the report of a meeting of the Working Group, which had been held during the course of the present Session. The Working Group had discussed in detail the difficulties facing developing countries in the establishment and acceptance of Codex MRLs. These included the availability of the necessary national infrastructures, both regulatory and in terms of laboratory facilities and trained personnel; the ability to generate and evaluate residue data and, in some cases, toxicological data; the ability to enforce MRLs; and the effective participation in Codex work through national Codex Committees or other mechanisms.

222. The Working Group referred to the differences in establishing and controlling MRLs for export, import and domestic production and consumption. Although it was recognized that other aspects of the regulatory control of pesticides were important, the Working Group emphasized that control of the residues in food entering the food supply and being exported was the main task of the Codex Programme. Many of the developing countries drew attention to the fact that importing countries applied their national limits rather than Codex MRLs which gave considerable difficulties in applying Codex MRLs for export purposes, and that it was difficult to respond quickly to the changing requirements of importing countries.

223. The Working Group drew attention to the need for continued technical assistance from FAO and WHO or other assistance agencies, and in particular to the need for early distribution of the findings of JMPR and its toxicological and residue evaluations.

Report on Activities in North Africa

224. The Regional Chairman for Northern Africa, Dr. Z.M. El Attal (Egypt) highlighted aspects of his report, distributed to the Committee as Room Document 12. He noted that while many African Countries have laws and regulations to regulate the import, manufacture and trade of pesticides, effective organization requirements were lacking. He drew attention to the fact that almost all African countries relied entirely on toxicological data reported by international organizations or by national authorities from outside the Region. He stated that while laboratories for pesticide quality control existed in most countries, facilities for the monitoring of residues and other contaminants were rare. He also noted that highly persistent organochlorine pesticides were extensively used in Africa.

225. Dr. El Attal recommended that to ensure safe and effective use of pesticides, Governments in Africa should establish or strengthen laboratories equipped with high-precision analytical instruments for quality control of pesticides and residue analysis. Also, that workshops and short-term training courses should be encouraged to assist African countries to determine the safety and registration procedures for pesticides. He stated finally that the increasing awareness of safety by Africans and concern for their environment necessitated the replacement of highly persistent pesticides by those of less persistent nature, which would optimize both field performance and bioactivity through improved pesticide management and nationalization of use.

Report of Activities in Sub-Saharan Africa

226. Dr. Abiola Adebayo (Senegal) reported on activities undertaken since the last Session of the Committee. A questionnaire had been distributed to 23 African countries to which 9 had replied. Replies to the questionnaire revealed that a number of African countries were in the process of studying problems relating to pesticides in all their aspects. Only one country, Tanzania, had adequate research structures which permitted the study of residues, although Senegal was in the process of establishing infrastructures and some research was being carried out by national authorities. The Committee was also informed that a seminar on the Registration of Phytosanitary Products had taken place in Yaoundé (Cameroon), 12-21 November 1987. Among the recommendations of the seminar was a general agreement to develop a dossier on trials carried out at national level or in countries with similar climatic or agronomic conditions.

Report of Activities in the Region of Latin America

227. The Regional Chairman, Dra. S. Canseco Gonzalez (Mexico) reported that a Directory was being established for the Region in order to identify contact persons and institutions, other than the Codex Contact Point, responsible for the registration of pesticides and monitoring of residues. She informed the Committee of meetings to be held in Mexico and Venezuela on registration procedures, and a national meeting in Mexico concerning the implementation of the Code of Conduct for Pesticides. The Regional Chairman also stressed the essential role of CCPR which brought together producers and exporters from developing countries with importers in order to understand each other's problems. She stressed the need to modernize the procedures of the Working Group in order to achieve tangible results.

228. The delegation of Argentina stressed the problems facing developing countries in regard to residues in commodities in international trade. These problems were increased by the lack of financial resources in countries with large external debts.

Report of Activities in the Region of Asia

229. The Chairman of the ad hoc Working Group, in his capacity as Regional Chairman for Asia, reported on activities held in that Region in the previous year, including a number of workshops and conferences held on various aspects of plant protection, residue analysis, data collection, and the fate of pesticides in the tropical environment. He drew attention to the fact that a third Regional Meeting had not been held as proposed, and requested that consideration be given to holding this meeting in the near future.

230. The Regional Chairman recommended that FAO, WHO, and other international agencies should continue to help those countries which do not yet have a pesticide law or a food law to develop one as soon as possible, and to assist in strengthening regulatory infrastructures in those countries which already have a pesticide law or a food law. Agencies should also give full assistance to developing countries so they can generate and be able to evaluate pesticide residue data more efficiently, and give full support for meetings, seminars, workshops and training sessions to be held in developing countries on pesticide residues.

Report on Activities in the South-West Pacific Region

231. The Regional Chairman, Mr. G.N. Hooper (Australia) reported that an information network had been established which allowed countries in the Region to consider questions raised in CCPR, and to provide information. Within the Region control systems in the developing

countries tended to be inadequate or did not exist. He noted that many countries lacked appropriate regulations and often looked to the practices in Australia, New Zealand or the United States of America for guidance.

Priorities for developing countries

232. With regard to identifying pesticides and commodities of interest to developing countries, the delegation of Egypt proposed that attention should be given to establishing MRLs for prothiofos in green peas and citrus, profenofos on citrus, and for tetrachlorvinphos in onions. The delegation of Chile drew attention to the sometimes rapid changes in the toxicological assessment of some pesticides and referred to cyhexatin as an example. The Committee noted that profenofos was included on the current Priority List, but that data were not available on prothiophos or tetrachlorvinphos. It requested all parties, to develop the data necessary for evaluation. The delegation of Egypt also requested early information on the acute toxicity of methamidophos.

FUTURE OF THE WORKING GROUP

233. The Working Group had considered a proposal put forward by the Secretariat that a standing item on the agenda of future meetings of the Committee should deal with the problems of developing countries in the control of pesticide residues in foods. This item would specifically cover (a) problems in regard to acceptances; (b) pesticides and/or commodities of priority interest to developing countries; (c) problems related to methods of residue analysis; and (d) other relevant matters. The Secretariat proposed that by discussing these subjects in the plenary Session, rather than in a Working Group, greater attention would be given to the concerns of developing countries by the Committee as a whole. Several delegations supported the idea of changing the procedure of bringing the problems of developing countries to the Committee's attention.

234. The Committee agreed that it was essential for the delegations from developing countries to discuss specific problems in relation to the work of the CCPR, and agreed that, in future, the delegations of developing countries would be invited to meet, as a Working Group, for this purpose, allowing a coordinated view to be put to Plenary on certain items. The Committee emphazised the importance of the work of the Regional Coordinators, and called upon their national governments to support their coordination work carried out for the Committee. The Secretariat was requested to inform the Governments concerned. FAO and WHO were requested to support the work of the Working Group fully.

Appointment of Regional Coordinators

235. The Committee decided to appoint the following Regional Coordinators, who would continue to be responsible for reporting on activities relating to the problems of pesticide residues in developing countries and for bringing specific problems to the attention of the Committee, and to meetings of Codex Regional Coordinating Committees, as appropriate:

Africa (North): Dr. El Attal (Egypt)
Africa (South of the Sahara): Mr. F.A.Abiola (Senegal)
Asia: Prof. S.P. Deema (Thailand)
Latin America : Dra. S. Conseco Gonzales (Mexico)
South-West Pacific: Mr. G.N. Hooper (Australia)

The Coordinators would hold their positions until the end of the 21st Session of the Committee and Dr. Deema would continue to act as Chairman of the Working Group between the 20th and the 21st Session of the Committee.

The Committee thanked the Chairman of the Working Group, Prof.S.P. Deema, and the members of the Group of their contribution to the work of the Committee.

CONSIDERATION OF THE AD HOC WORKING GROUP ON REGULATORY PRINCIPLES

236. The Committee had before it the report of the ad hoc Working Group and document CX/PR 88/15 on the subject of metabolites of pesticides used as pesticides. The report of the Working Group was introduced by Mr. J. Wessel (United States of America), Chairman of the Group.

Recommended National Regulatory Practices

237. It was noted that the Working Group had finalized a questionnaire to obtain from governments updated information regarding national regulatory practices relative to acceptance and for use of Codex MRLs and information on the usefulness of the Codex document "Recommended National Regulatory Practices to Facilitate Acceptance and Use of Codex MRLs (CAC/PR 9-1985). The questionnaire took into account the exchange of views during the seminar on GAP and related discussions during the session of the CCPR.

Codex MRLs for Metabolites of Pesticides Which are Used Also as Pesticides

238. The Working Group had considered paper CX/PR 88/15 and agreed to the general principles adopted by 1987 JMPR for estimating MRLs for metabolites when used as pesticides in their own right. It was further noted that these principles were consistent with those adopted by the CCPR at its 14th Session and that, in addition, both the JMPR and CCPR had indicated that MRLs for such compounds must in each case be considered on their own merits.

239. The Working Group had noted inconsistencies for some of the compounds in the Codex Guide, where either the residue definition required changes or some indication needed to be given for the data base evaluated for the compound(s) for which an MRL was recommended. The suggested changes in the expression of the residues for dimethoate and omethoate are as follows:

dimethoate: dimethoate resulting from the use of dimethoate and/or formothion.

omethoate : omethoate resulting from the use of omethoate and/or dimethoate, and/or formothion.

During the discussion it had also been suggested that the residue definition should only describe the chemical to be analysed and that reference to the origin of the residue should be included in notes elsewhere.

240. The Working Group had also discussed briefly the question of Codex MRLs for pesticides (e.g. vinclozolin) with metabolites in their residue definition that are common to other pesticides. It had been decided that this issue should be referred to the ad hoc Working Group on Methods of Analysis.

Guidelines for Predicting Dietary Intake of Pesticide Residues

241. The Working Group had considered the above Guidelines (WHO/EHE/FOS/88.2) which had been finalized by the FAO/WHO/UNEPConsultation held in Geneva (October 1987). The Working Group had agreed that the Guidelines fulfilled the CCPR's mandate and that they would facilitate acceptance of Codex MRLs by Governments.

The Working Group had further recommended that both the report of the Consultation (WHO/EHE/FOS/88.3) and the Guidelines be circulated to Governments for comments with a view of endorsement by the CCPR at its next Session and incorporation of the Guidelines into the Codex Guide on Pesticide Residues.

Conclusions of the CCPR

242. The Committee discussed the report of the Working Group in detail and also considered how the Guidelines on dietary intake should be further developed. It was agreed that:
(a) the questionnaire on regulatory practices should be sent to governments and the replies received should be analyzed by the Chairman of the Working Group;
(b) the principles for handling metabolites used as pesticides as agreed by the 1987 JMPR and endorsed by the Working Group were appropriate and should be applied on an ad hoc basis in setting Codex MRLs;
(c) the question of a metabolite appearing in the residue definition of more than one pesticide should be referred to the Working Group on Method of Analysis.

243. The Committee endorsed the Guidelines for predicting dietary intake of pesticide residues developed by the FAO/WHO Consultation and agreed that there was no need to obtain further comments on it. The Committee referred the Guidelines to the Excecutive Committee with the request that they be included in the Codex Guide concerning Pesticide Residues. It was agreed that Governments should be requested to provide information on food intake data, especially for foods covered by Codex MRLs, and other relevant information in order to enable WHO to prepare estimates of pesticide residue intakes.

244. The Committee considered that the remaining work arising from the questionnaire (para 237) did not require the establishment of a Working Group. It thanked the Chairman Mr. J. Wessel and members of the Working Group for their contribution to work on pesticide residues.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON PRIORITIES

245. The Committee had before it the report of the Working Group, which was introduced by its Chairman, Mr. B.B. Watts.

246. The group had, on several occasions, discussed a list of 8 compounds which had been proposed for inclusion in the priority list (see ALINORM 87/24A, para 303). In spite of repeated efforts to obtain information on the availability of data for evaluation by the JMPR, only data for propham could be expected. These data would be available in time for evaluation by the 1990 JMPR. Chlorpropham was often used in the same formulation with propham, but the producer in the United States of America was still looking into the possible updating of the existing data base. It was, therefore, decided to keep chlorpropham as a tentative candidate for evaluation by the JMPR in 1990. The representative of GIFAP agreed to contact the manufacturer for further information on data availability. The other products, thiophanox, dalapon, BPMC, isoprothiolane, IBP and isoprocarb would not be given further consideration.

247. A number of changes had to be made to the agendas of the future Joint Meetings. A list reflecting the situation as of April, 1988 is given in Appendix IV. The Committee was reminded that the deadline for submission of data for toxicological evaluation is June 30 of the year preceding evaluation.

Consideration of 1988 proposals for the priority list

248. Several potential candidates for the priority list were suggested by some delegations. In the light of information on the availability of data and the relative importance of the compounds considered the new proposals were prioritized as follows:

Number	Common Name	Country	Data Available	JMPR	Manufacturers
88-01	flusilazole	USA	1988	1989	Dupont
88-02	terbufos	USA	1988	1989	Cyanamid
88-03	propham	OECD/NL	1988 (end)	1990	Bayer
88-04	chlorpropham	OECD/NL	? (see para 246)	1990	Chevron
88-05	cyromazine	NL	1989	1990	Ciba Geigy
88-06	profenofos	NL	1989(tentative)	1990	Ciba Geigy
88-07	hexaconazole	NZ	1989	1990	ICI
88-08	hexythiazox	NL	1990	1991	Nippon Soda

Priority review of cyromazine was requested as it had already caused problems in international trade. The compound was mainly used as an ectoparasiticide and for feed-though uses for the control of flies in animal husbandry, and was, therefore, considered to be a pesticide rather than a veterinary drug.

249. Mention was made of **fomesafen**, a diphenyl ether herbicide used on soya beans in the United States of America, Brazil and other countries. As it does not leave detectable residues on the crop, it was not expected that it would be proposed for priority consideration. However, there might be a request from a country for toxicological evaluation by WHO, which would then put it on the agenda of a future JMPR. This would not automatically imply its inclusion in the Codex system.

Re-evaluation of pesticides evaluated prior to 1976

250. At its 19th Session, the Committee decided that a Circular Letter should be distributed, containing a request for additional information on pesticides which were last evaluated toxicologically before 1976 and for which the ADIs were still applicable. This information should include the availability of additional data for evaluation and the relative importance of the compounds and their residues in international trade, as well as the actual use patterns. This was to enable the Committee to prioritize them.
It was agreed that this questionnaire should be sent out at the earliest opportunity. Some information had already been received. Any additional information would be processed through the Working Group.
The manufacturer's representative indicated that new data would be submitted for azinphos-methyl and disulfoton in time for the 1990 meeting of JMPR and for parathion in time for the 1991 meeting of JMPR.

251. It was pointed out that several of these pesticides still had group MRLs for broad groups of fruits or vegetables which, in the light of the new classification, might be replaced by specific MRLs. Additional data were needed to enable the JMPR to re-evaluate these group MRLs.

252. The Committee was informed by the WHO secretariat that IPCS was developing a document entitled 'Principles of Safety Assessment for Pesticide Residues in Food'. This document will review questions such as that raised by the delegation of The Netherlands regarding criteria for evaluating organophosphorus pesticides.

253. A question was asked about the meaning of the word "significant" in relation to its use in the Circular Letter on Proposals for Additions to Priority Lists. It was decided that the word "significant" should be deleted from the letter as any disruption of trade due to pesticide residues in food has the potential to be a serious problem for the country concerned.

254. The delegation of Egypt requested that consideration be given to the possible inclusion of prothiofos and profenofos, which gave rise to problems in its country.

255. The delegation of Switzerland drew attention to an important issue in pesticide development, which was the marketing of single isomers of compounds which up till now were marketed as racemic mixtures of isomers, not all of them biologically active.
A number of such isomers were currently being registered in its country. As it normally would imply a decreased application rate, this development was very interesting.
It was indicated that the generation of these compounds might result in complex issues with regard to the establishment of separate MRLs and the expression of residues.
The Committee concluded that these new compounds should be processed through the existing procedures.

Appointment of a new ad hoc Working Group

256. The Committee thanked the Working Group and its Chairman for the important work prior to and during this Session of the Committee. As there was a considerable amount of future work relating to priorities, it was decided to establish a new ad hoc Working Group which would function until the end of the next Session under the chairmanship of Mr. B.B. Watts, Ms. J. Taylor (Canada) replacing him if necessary.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON CONTAMINANTS

257. The Committee had before it the Report of the ad hoc Working Group on Contaminants, which was introduced by its Chairman, Mr. R.B. Maybury (Canada). He recalled that at the 19th Session it had been concluded that further monotoring data, especially data based on the determination of individual congeners, were necessary before any limits could be recommended.
In the meantime, additional data had been received by the JFCMP. Canada and the Federal Republic of Germany had submitted data based on individual congeners, whereas Thailand and the United States of America had submitted data based on total PCB calculations. Variations of PCB levels within and between countries in single commodities is often great.

258. A recent WHO/EURO document also contained information onindividual PCB isomers. A collaborative study of a congener-specific method, in cooperation between the Nordic countries and AOAC, was scheduled to start the end of 1988.

259. The Meeting was informed that the toxicological evaluation of PCBs by IPCS could not be expected before the end of 1989. However, the representative of WHO indicated that JECFA was prepared to evaluate both toxicological aspects and data on the actual occurrence in foodstuffs and possible health implications of the dietary intake. It was noted that, because of the relationship between PCBs and organochlorine pesticides cooperation between JECFA and JMPR was indicated.

260. As the 17th Session of the Commission had allocated the reponsibility for industrial and environmental contaminants to the Codex Committee on Food Additives and Contaminants (CCFAC), it was recommended that the responsibility with regard to the general approach for limit setting be transferred to that Committee. The Committee would give advice to the CCFAC with regard to methods of analysis and possibly monitoring data. It was concluded that this did not require any change in the terms of reference of the Committee. If need should arise, the Committee could, in the future, be involved again in environmental contaminants.

The Committee expressed the wish to be kept informed of developments within CCFAC and to be given the opportunity to participate in future work in this area.

261. It was agreed that the Secretariat would inform the CCFAC on the work of the Committee that had taken place in this area and the results obtained so far, including the following recommendations:

a) that PCB congeners 28, 52, 101, 110, 138, 153 and 180 be chosen when determining individual PCB congeners
b) that it was more likely to obtain international agreement for possible limits on basis of these individual congeners, although some countries might prefer to keep to methods determining total PCB's;
c) that further data on the occurrence of PCBs in foodstuffs throughout the world should be requested through JFCMP, possibly in terms of specific PCB congeners (see also para 330 of ALINORM 87/24A)
d) that the Committee and its ad hoc Working Group on Methods of Analysis would continue to give advice on internationally acceptable methods of analysis.

OTHER BUSINESS

262. There was no other business discussed by the Committee.

DATE AND PLACE OF THE NEXT SESSION (Item 17)

263. The Committee was informed that its twenty-first Session would be held from 10-17 April 1989, in the Congresgebouw, The Hague. The ad hoc Working Group on Priorities would meet prior to the Session on Saturday 8 April 1989.

264. The Chairman, Ir. A.J. Pieters, informed the Committee that Ir. J. van der Kolk, Ministry of Welfare, Health and Cultural Affairs, had been appointed as the new Chairman of the Committee from the end of the present, twentieth, Session.

VALEDICTION

265. The Committee unanimously expressed its deep appreciation to Ir. Pieters for his outstanding contribution to its work in his role as Chairman. His clear decisions and wise judgements had permitted the Committee to achieve its role as a forum where all parties could discuss problems relating to pesticide residues on a sound and scientific basis, and contribute to the chief aims of the Codex Alimentarius Commission to ensure fair trade in agricultural commodities and protect the health of consumers. His kindness and good sense of humour had been instrumental in encouraging all delegations to express their opinions freely, and helped the Committee to resolve many key problems.

266. The Committee wished Ir. Pieters and his family well for the future, and presented him with a token of their highest esteem.

SUMMARY STATUS OF WORK

Recommendation	Step	For Action by	Document Reference
Guidelines for Predicting Potential Dietary Exposure to Pesticide Residues		Executive Committee; Governments	paras. 46,47,243 of ALINORM 89/24; WHO/EHE/FOS/88.2
Classification of Foods and Animal Feeds		CCPR JMPR	para. 57 of ALINORM 89/24; CAC/PR 4-1988 (preliminary issue)
Proposed draft MRLs	3	Governments	CX/PR 89/2 (to be issued)
Proposed draft MRLs	5	Commission	ALINORM 89/24-Add.1
Draft MRLs	6	Governments	ALINORM 89/24-Add.1; CX/PR 89/2 (to be issued)
Draft MRLs	8	Commission	ALINORM 89/24-Add.1
Proposed amendments to Codex MRLs (non-substantial)	-	Commission	ALINORM 89/24-Add.1
Up-dating of list of suitable methods of residue analysis and discussion of "analytical quality assurance (AQA)"		CCPR and its Working Group on Analysis	Appendix to Report of the Working Group on Analysis of CCPR; CAC/PR 8-1986; paras. 208 - 213 and App.III of ALINORM 89/24
Proposed changes to "Guidelines on Pesticide Residue Trials to Provide Data for the Registration of Pesticides and the Establishment of Maximum Residue Limits"		Codex Secretariat; FAO Plant Production and Protection Division	para 251 of ALINORM 87/24A; para 215 of ALINORM 89/24
Proposed changes to the Recommended Method of Sampling for the Determination of Pesticide Residues		Commission	para. 216 of ALINORM 89/24; CAC/VOL.XIII-2nd.Ed., Part VI
Draft Recommended Method of Sampling for the Determination of Pesticide Residues in Meat and Poultry Products for Control Purposes	3	Ms. M. Cordle, USA; Governments; CCPR	CX/PR 89/3 (to be issued); para. 217 of ALINORM 89/24
Guidelines for Developing Data on Pesticide Residues in Food as Consumed		Mr. J.A.R. Bates, UK; JMPR FAO/WHO	paras. 218-220 of ALINORM 89/24

Recommendation	Step	For action by	Document Reference
Identification of problems relative to pesticide residues in food in developing countries		Regional Coordinators on pesticide residue matters; Secretariat; CCPR	paras. 221-235 of ALINORM 89/24
Questionnaire on regulatory practices		Mr. J. Wessel, USA; Governments	paras. 237, 242 of ALINORM 89/24; CAC/PR 9-1985
Principles for handling metabolites used as pesticides		JMPR CCPR Governments	paras. 238-239, 242 of ALINORM 89/24; CX/PR 88/15; Report of 1987 JMPR
Codex MRLs for pesticides with metabolites which are also derived from other pesticides		CCPR and its Working Group on Methods of Analysis	para. 240 of ALINORM 89/24
Re-evaluation of pesticides evaluated prior to 1976 - issue of questionnaire		Secretariat; Governments; Industry; JMPR	paras. 250-251 of ALINORM 89/24
Priority list of pesticides		Governments; Industry; JMPR	paras. 248-249 of App.IV, ALINORM 89/24
Maximum levels for PCBs		Secretariat; Codex Committee on Food Additives and Contaminants	paras. 257-261 of ALINORM 89/24
Definitions of "good agricultural practice in the use of pesticides" and "maximum residue limits"		JMPR Governments CCPR	para. 22, App.V of ALINORM 89/24

LIST OF PARTICIPANTS
LISTE DES PARTICIPANTS
LISTA DE PARTICIPANTES

Chairman of the Session
Président de la session
President de la reunión

Ir. A.J. Pieters
Ministry of Welfare, Health
and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk
Netherlands

ARGENTINA
ARGENTINE
ARGENTINA

VICTORIANO TOLOSA
Director General
Servicio Nacional de
Laboratorios de
Productos Ganaderos
Paseo Colon 922
2e Piso, Ofic. 230
1063 Buenos Aires

EDUARDO A. CANALE
Second Secretary
Economic and Commercial
Affairs
Catsheuvel 85
2517 KA The Hague
Netherlands

AUSTRALIA
AUSTRALIE
AUSTRALIA

G.N. HOOPER
Pesticides Coord. Agricultural
and Veterinary Chemicals
Section, Department of Primary
Industry and Energy, Canberra,
A.C.T. 2600

A.L. BLACK
Medical Services Adviser
(Toxicology) Department
of Community Services
and Health
P.O. Box 100
Woden A.C.T.

AUSTRALIA (cont'd)

A.W. MORLEY
Agricultural and Veterinary
Chemicals Association of
Australia
Private Bag 938
North Sydney 2059

T. McEWAN
Director Biochemistry Branch
Animal Research Institute
665 Fairfield Road
Yeerongpilly
Brisbane 4105 QLD

D.J. WEBLEY
Manager
Grain Hygiene Laboratory
Australian Wheat Board
Box 4562
Melbourne 3001

AUSTRIA
AUTRICHE
AUSTRIA

ROBERT WOMASTEK
Federal Institute for
Plant Protection
Trunnerstrasse 5
A-1021 Vienna

EDMUND PLATTNER
Federal Chancellary
Radetzkystrasse 2
A-1030 VIENNA

BELGIUM
BELGIQUE
BELGICA

W. DEJONCKHEERE
Lab. voor Fytofarmacie
Fac. van de Landbouw-
wetenschappen
Rijksuniversiteit Gent
Coupure 653
B 9000 Gent

M. GALOUX
Station de Phytopharmacie
Rue du Bordia 11
B-5800 Gembloux

L. SMEETS
Dienst voor Planten-
bescherming
Ministerie van Landbouw
Bolwerklaan 21
1210 Brussel

G. HOUINS
Dienst voor Planten-
bescherming
Ministerie van Landbouw
Bolwerklaan 21
1210 Brussel

BOTSWANA
BOTSWANA
BOTSWANA

M. MANNATHOKO
Deputy Permanent Secretary
Ministry of Agriculture
P/Bag 003
Gaborone

T. Diteko
Principal Veterinary Officer
National Veterinary Laboratory
P/Bag 0035
Gaborone

BRAZIL
BRESIL
BRASIL

PAULO ROBERTO PALM
Second Secretary of the
Embassy of Brazil
Mauritskade 19
2514 HD The Hague
The Netherlands

BRAZIL (cont'd)

J.C. de SOUZA CARVALHO
Brazilian Ministry of
Agriculture
Anexo Ministerio da
Agricultura
3° Andar S/350
70.000-Brazilia-DF

CANADA
CANADA
CANADA

JANET K. TAYLOR
Pesticides Directorate
Agriculture Canada
SBI Building, 2nd Floor
2323 Riverside Drive
Ottawa, Ontario
K1A 0C6

R.B. MAYBURY
Laboratory Services Division
Food Inspection Directorate
Agriculture Canada
Laboratory Services Bldg.No.22
Central Experimental Farm
Ottawa, Ontario
K1A 0C5

B. MURRAY
Chemical Evaluation Division
Food Directorate
Health Protection Branch
Health and Welfare Canada
Banting Bldg., 4th Floor East
Tunney's Pasture
Ottawa, Ontario
K1A 0L2

CHILE
CHILI
CHILE

ROBERTO GONZALEZ
Faculty of Agricultural
Sciences, University of Chile
P.O. Box 1004
Santiago

CHINA, PEOPLE'S REP.OF
CHINE, REP.POPULAIRE DE
CHINA, REP.POPULAR DE

WUJI ZHUANG
Associate Professor
China Import & Export
Commodity Inspection
Technology Institute
12, Jianguomenwai Street
Beijing (Peking)

COTE-D'IVOIRE

BAMBA KALIDJA
Sous-Directrice de la
Direction de la Valorisation
Ministère de la Recherche
Scientifique
B.P. V 151
Abidjan 01

KOUABLE BI BO
Ministère de l'Agriculture
Direction de la Protection
des Végétaux
B.P. V 7
Abidjan

CUBA
CUBA
CUBA

DALIA ROJAS
Area Higiene y Epidemiologia
Ministerio de Salud Pública
33 Y N, Vedado
La Habana

CZECHOSLOVAKIA
TCHECOSLOVAQUIE
CHECOSLOVAQUIA

L. ROSIVAL
Director, Centre of Hygiene
of the Research Institute for
Preventive Medicine
Limbová 11. L4
Bratislava

V. BENES
Institute of Hygiene and
Epidemiology
Srobareva 48
10042 Prague 10

DEM.PEOPLE'S REP.OF KOREA
REP.POP.DEM. DE COREE
REP.POP.DEM. DE COREA

LI SOK SU
Head, Department of
Foodstuffs Institute
P.O. Box 901
Pyongyang

HAN GYU UN
Researcher of Foodstuffs
Institute
P.O. Box 901
Pyongyang

DENMARK
DANEMARK
DINAMARCA

KAREN GRAM JENSEN
Scientific Officer
National Food Agency
Mørkhøj Bygade 19
DK-2860 Søbørg

EGYPT
EGYPTE
EGIPTO

ZAKARIA MOSTAFA EL ATTAL
Central Agricultural
Pesticide Laboratory
Ministry of Agriculture
Dokki, Gizah

SALWA MOHAMED DOGHEIM
Control Agricultural
Pesticide Laboratory
Ministry of Agriculture
Dokki, Gizah

ALI ABOU SERIEH RAMADAN
Food Science & Technology
Department
National Research Centre
Egyptian Academy of Scientific
Research
Cairo

FINLAND
FINLANDE
FINLANDIA

VESA TUOMAALA
Secretary General
Codex Alimentarius
Committee of Finland
Box 5
00531 Helsinki 53

KIMMO HIMBERG
Research Officer
Technical Research Centre
of Finland
Biologinkuja 1
02150 Espoo

PAIVI JULKUNEN
Toxicologist
National Board of Health
Box 220
00531 Helsinki

RITVA MUTANEN
Chemist
State Institute of Agricultural
Chemistry
Box 83
01301 Vantaa

FINLAND (cont'd)

KALEVI SIIVINEN
Head of Pesticide Section
Customs Laboratory
Tekniikantie 13
02150 Espoo

FRANCE
FRANCE
FRANCIA

M.B. DECLERCQ
Director
Ministère de l'Economie,
des Finances et de la
Privatisation
D.G.C.C.R.F.
Laboratoires Central de
Recherche et d'Analyses
25 Avenue de la Republique
91305 Massy

M. DE CORMIS
INRA
Institut National de la
Recherche Agronomique
Centre de Recherches d'Avignon
B.P. 91
84140 Montfavet

M. HASCOET
I.N.R.A.
Institut National de la
Recherche Agronomique
Centre de Recherches de
Versailles Station de
phytopharmacie
Etoile de Choisy
Route de Saint-Cyr
Cedex 78026 Versailles

M. DE CACQUERAY
U.I.P.P.
Union des Industries de la
Protection des Plantes
2, Rue Denfert-Rochereau
92100 Boulogne-Billancourt

M. L'HOTELLIER
U.I.P.P.
Union des Industries de la
Protection des Plantes
2, Rue Denfert-Rochereau
92100 Boulogne-Billancourt

J.C. TOURNAYRE
U.I.P.P.
Union des Industries de la
Protection des Plantes
2, Rue Denfert-Rochereau
92100 Boulogne-Billancourt

GABON
GABON
GABON

MBA ASSOUMOU LEON
Chef de Service de la
Protection des Végétaux
à la Direction de
l'Agriculture
B.P. 633
Libreville

GERMANY, FED.REP. OF
ALLEMAGNE, REP.FED.D'
ALEMANIA, REP.FED. DE

WALTER TÖPNER
Regierungsdirektor
Bundesministerium für Jugend,
Familie und Gesundheit
Deutschherrenstrasse 87
D-5300 Bonn 2

R. PETZOLD
Regierungsdirektor
Bundesministerium für Ernährung,
Landwirtschaft und Forsten,
Rochusstrasse 1
D-5300 Bonn 1

W. LINGK
Direktor und Professor
Bundesgesundheitsamt
Postfach 330013
D-1000 Berlin 33

HANS BECK
Wissenschaftlicher Direktor
Bundesgesundheitsamt
Postfach 33 00 13
D-1000 Berlin 33

H.G. NOLTING
Direktor und Professor
Biologische Bundesanstalt
für Land- und Forstwirtschaft
Messeweg 11/12
D-3300 Braunschweig

J.R. LUNDEHN
Wissenschaftlicher Oberrat
Biologische Bundesanstalt
für Land- und Forstwirtschaft
Messeweg 11/12
D-3300 Braunschweig

GERMANY, FED.REP.OF (cont'd)

KLAUS PAULUS
Wissenschaftlicher Leiter
des Bundes für Lebensmittelrecht
und Lebensmittelkunde e.V.
Godesberger Allee 157
D-5300 Bonn 2

GABRIELE TIMME
Bayer AG PF-A/CE-RA
D-5090 Leverkusen-Bayerwerk

GEORG LEBER
Industrieverband
Pflanzenschutz e.V.
Karlstrasse 21
D-6000 Frankfurt (M)

E. PICK
Industrieverband
Pflanzenschutz e.V.
Karlstrasse 21
D-6000 Frankfurt

W. BOSSE
GTZ
Pesticide Residue Project
Postfach 4001
D-6100 Darmstadt

H. REGENSTEIN
BASF A.G.
Land.Versuchsstation
6703 Limburgerhof

HUNGARY
HONGRIE
HUNGRIA

KATALIN SOOS
Head of Department on
Pesticide Residues
National Institute of Food
Hygiene and Nutrition
Gyàli ut 3/a
Budapest
1097 Hungary

LASZLO GYÖRFI
Head of Department on
Pesticide Residues
Plant Protection and
Agrochemistry
Centre Budapest
P.O. Box 127
Budapest 1502 Hungary

IRELAND
IRLANDE
IRLANDA

MARK LYNCH
Coordinator
Pesticide Control Service
Department of Agricultural Food
Abbotstown
Castleknock
Dublin 15

JAMES QUIGLEY
Senior Chemist
State Laboratory
Abbotstown
Castleknock
CO Dublin

ISRAEL
ISRAEL
ISRAEL

M. HOFFMAN
Head of Pesticide Division
Department of Plant Protection
and Inspection
Ministry of Agriculture
P.O. Box 78
Bet Dagan 50250

Z. GOLOP
Agricultural Consultant to
Bromine Compounds Co. Ltd.,
Secretary of Israeli Association
of Producers of Pesticides
P.O. Box 80
Beer Sheba

ITALY
ITALIE
ITALIA

LUIGI GIANNICO
Ministero della Sanitá
D.G.I.A.N.
Piazza Marconi 25
Roma

GIANCARLO IMBROGLINI
Ministero Dell'Agricoltura
e Foreste
Istituto Sperimentale
per la Patologia Vegetale
Via C.G. Bertero, 22
00156 Roma

ITALY (cont'd)

ENRICE QUATTRUCCI
Istituto Nazionale
della Nutrizione
Via Ardeatina 546
00173 Roma

JAPAN
JAPON
JAPON

JUNJI YAMAMOTO
Food Chemistry Division
Environmental Health Bureau
Ministry of Health and
Welfare
1-2-2 Kasumugaseki Chiyoda-ku
Tokyo 100

KAZUO KOIZUMI
Assistant Director
Soil and Agrochemical Division
Water Quality Bureau
Environment Agency
1-2-2 Kasumigaseki Chiyodaku
Tokyo 100

KAZUO OKUTOMI
Senior Inspector
Agricultural Chemicals
Inspection Station
Technical Official
Ministry of Agriculture
Forestry and Fisheries
Suzukicho 2-772
Kodairashi, Tokyo 187

SABURO TAKEI
Technical Adviser
Society of Agricultural
Chemical Industry
Nihon-Bashi Club.
6F 1-5-8 Nihon-Bashi Muromachi
Chuoku Tokyo 103

HEDEJI HOSODA
Technical Adviser
Society of Agricultural
Chemical Industry
Nihon-Bashi Club. 6F
1-5-8 Nihon-Bashi Muromachi
Chuoku Tokyo 103

N. KANO
Sumitomo Chemical
Plant Protection Dept.
7-9, 2-chome Nihonbashi
Chuo-ku, Tokyo 103

JORDAN
JORDANIE
JORDANIA

AYMEN AL JADEED
Ministry of Health
P.O. Box 86
AMMAN

MADAGASCAR
MADAGASCAR
MADAGASCAR

HENRI RAJAOFERA
Ambassade de Madagascar
276 Avenue de Tervuren
1150 Bruxelles
Belgium

MALAYSIA
MALAISIE
MALASIA

LIM TECK THAI
Director
Health Division
Chemistry Department
Jalan Sultan
46661 Petaling Jaya
Selangor

MEXICO
MEXIQUE
MEXICO

SILVIA CANSECO
Agriculture Department
Insurgentes Sur 476-13°
Col.Roma
Mexico, D.F. 06760

NETHERLANDS
PAYS-BAS
PAISES BAJOS

W.H. VAN ECK
Ministry of Agriculture and
Fisheries/Plant Protection
Service
P.O. Box 9102
6700 HC Wageningen

P.A. GREVE
Ministry of Welfare, Health
and Cultural Affairs
National Institute of
Public Health and Environmental
Hygiene
P.O. Box 1
3720 BA Bilthoven

NETHERLANDS (cont'd)

D.G. KLOET
Ministry of Agriculture and Fisheries
Directorate of Nutrition and Quality Affairs
P.O. Box 20401
2500 EK The Hague

J. VAN DER KOLK
Ministry of Welfare, Health and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk

E.M. DEN TONKELAAR
Ministry of Welfare, Health and Cultural Affairs
National Institute of Public Health and Environmental Hygiene
P.O. Box 1
3720 BA Bilthoven

L.G.M.Th. TUINSTRA
Ministry of Agriculture and Fisheries
State Institute for Quality Control of Agricultural Products
P.O. Box 230
6700 AE Wageningen

A.W.M. HUIJBREGHTS
Commission for the Dutch Food and Agricultural Industry
Sugarbeet Research Institute
P.O. Box 32
4600 AA Bergen op Zoom

I.M.F. RENTENAAR
General Commodity Board for Arable Products
P.O. Box 29739
2502 LS The Hague

F.G. DE BOER
Nefyto/Duphar B.V.
P.O. Box 2
1243 ZH 's-Graveland

NEW ZEALAND
NOUVELLE-ZELANDE
NUEVA ZELANDIA

B.B. WATTS
Superintendent
Pesticides Section
Ministry of Agriculture and Fisheries
Private Bag
Wellington

A.D. TALBOT
Chairman
New Zealand Pesticides Board
P.O. Box 817
Timaru

NIGERIA
NIGERIA
NIGERIA

B.K.A. ADDISON
Director
Federal Ministry of Health, Food and Drugs Administration and Laboratory Services
P.M. Box 12525
LAGOS

NORWAY
NORVEGE
NORUEGA

ARNE FROSLIE
Head of Research Affairs
National Veterinary Institute
P.O. Box 8156 Dep.
N-0033 Oslo 1

TORE H. SMITH
Senior Engineer
National Institute of Public Health
Geitmyrsveien 75
0462 Oslo 4

JORALF PAULSEN
Pesticides Board
P.O. Box 3
N-1430 As-NLH

CARL ERIK SEMB
Senior Executive Officer
Ministry of Agriculture
P.O. Box 8007
Dep. N-0030 Oslo 4

POLAND
POLOGNE
POLONIA

JAN LUDWICKI
Chief of Section
National Institute of Hygiene
24 Chocimska str.
Warsaw

KRYSTYNA TRAWICKA
Specjalista
Quality Inspection Office
Ministry of Foreign Economic
Relations
32/34 Zurawia str.
Warsaw

PORTUGAL
PORTUGAL
PORTUGAL

M. ASSUNÇAO G.VAZ
Centro Nacional de Protecçao
da Produçao Agricola
Quinta do Marques
2780 Oeiras

JULIA R. FERREIRA
Centro Nacional de Protecçao
da Produçao Agricola
Quinta do Marques
2780 Oeiras

REPUBLIC OF KOREA
REPUBLIQUE DE COREE
REPUBLICA DE COREA

KIM MIN-JAE
Plant Protection Division
Ministry of Agriculture
Forestry and Fisheries
Gwachon-Si
Kyenggi-Do

CHUNG HOO-SUP
College of Agriculture
Seoul National University
Suwon-Si
Kyeonggi-Do

SENEGAL
SENEGAL
SENEGAL

ABIOLA ADEBAYO
Comité National du Codex
Ecole Vétérinaire
B.P. 5077
Dakar

SPAIN
ESPAGNE
ESPANA

E. CELMA
Ministerio de Agricultura
Juan Bravo 3-B
Madrid-28006

A. YAGÜE
Ministerio de Agricultura
C/Juan Bravo, 3-B
Madrid-28006

JOSEFINA LOMBARDERO
Laboratorio Arbitral
Ministerio de Agricultura
Avda. Puerta de Hierro, s/n
28040 Madrid

SWEDEN
SUEDE
SUECIA

ARNE ANDERSSON
Senior Chemist
National Food Administration
Box 622
S-751 26 UPPSALA

INGEGÄRD BERGMAN
Senior Administrative Officer
National Food Administration
Box 622
S-751 26 UPPSALA

VIBEKE BERNSON
Deputy Head of Division
National Chemicals Inspectorate
Box 1384
S-171 27 SOLNA

DICKEN JOHANSSON
Agronomist
Svenska Lantmännens Riksförbund
Chemical Department
Box 12238
S-102 26 STOCKHOLM

SWEDEN (cont'd)

MALIN AKERBLOM
Head of Pesticide Section
National Laboratory for
Agricultural Chemistry
Box 7004
S-75007 UPPSALA

SWITZERLAND
SUISSE
SUIZA

CL. WÜTHRICH
Food Control Division
Federal Office of Public Health
Haslerstrasse 16
CH-3001 Berne

J.P. SEILER
Swiss Federal Research
Station
CH-8820 Wädenswil

A. GENONI
Nestec SA
CH-1800 Vevey

T. LAANIO
Swiss Society of
Chemical Industry,
c/o Ciba-Geigy Ltd.,
CH-4002 Basel

T. STIJVE
Nestec SA
CH-18100 Vevey

THAILAND
THAILANDE
TAILANDIA

SAKDIPRAYOON DEEMA
Inspector General
Ministry of Agriculture and
Co-Operatives
Rajdamnern Avenue
Bangkok 10200

UDOM DECHMANI
Director of Plant
Protection Service
Division
Department of Agricultural
Extension
Bangkok 10900

THAILAND (cont'd)

NUANSRI TAYAPUTCH
Research Scientist
Agricultural Toxic Substances
Division
Department of Agriculture
Bangkok 10900

SUPHART CHITRANUKROH
First Secretary
Royal Thai Embassy
Buitenrustweg 1
2517 KD The Hague
The Netherlands

UNITED KINGDOM
ROYAUME-UNI
REINO UNIDO

D.A. LOVE
Principal
Pesticides and Infestation
Control Division, Branch A
Ministry of Agriculture,
Fisheries and Food
Room 682
Great Westminster House
Horseferry Road
London SW1P 2AE

F. RADCLIFFE
Pesticides and Infestation
Control Division, Branch C
Ministry of Agriculture,
Fisheries and Food
Great Westminster House
Horseferry Road
London SW1P 2AE

M. MURPHY
Pesticides and Infestation
Control Division, Branch A
Ministry of Agriculture,
Fisheries and Food
Great Westminster House
Horseferry Road
London SW1P 2AE

D.F. LEE
Principal Scientific Officer
Ministry of Agriculture,
Fisheries and Food
Pesticide Registration
and Surveillance Department
Room 131
Harpenden Laboratory
Hatching Green
Harpenden
Hertfordshire AL5 2BD

UNITED KINGDOM (cont'd)

D. HALLIDAY
Head, Chemical Control and
Pesticide Analysis Section
Overseas Development Natural
Research
Institute Storage Department
London Road, Slough
Berkshire SL3 7HL

D.R. TENNANT
Food Safety and Surveillance
Unit
Food Science Division
Ministry of Agriculture,
Fisheries and Food
Great Westminster House
Horseferry Road
London SW1P 2AE

G. WILLIS
ICI British Agrochemicals
Association
Fernhurst, Haslemere
Surrey GU27 3JE

UNITED STATES OF AMERICA
ETATS-UNIS D'AMERIQUE
ESTADOS UNIDOS DE AMERICA

STANFORD N. FERTIG
Research Leader
Pesticide Assessment
Laboratory
U.S. Department of Agriculture
Agricultural Research Service
Building 1070, BARC-East
Beltsville, Maryland 20705

ELISABETH CAMPBELL
Division of Regulatory Guidance
HFF-312
Food and Drug Administration
200 C Street, S.W.
Washington, D.C. 20204

GLENN CARMAN
President, California Citrus
Quality Council
953 West Foothill Boulevard
Claremont, California 91711

CHARLES W. COOPER
Assistant Director
Center for Food Safety and
Applied Nutrition
Food and Drug Administration
200 C Street, S.W.
Washington, DC 20204

UNITED STATES OF AMERICA (cont'd)

MARYLN CORDLE
Deputy Director
Residue Evaluation and Planning
Division
Science Program, FSIS
Room 602, Annex Building
300 12th Street, S.W.
Washington, D.C. 20250

PAUL B. ENGLER
Executive Secretary
California Citrus Quality
Council
953 West Foothill Blvd.
Claremont, California 91711

N. FRED IVES
Office of Pesticide Programs
U.S. Environmental Protection
Agency TS-769 C
401 M Street, S.W.
Washington, D.C. 20460

BRUCE JAEGER
U.S. Environmental Protection
Agency
Toxicology Branch, TS769/HED
Crystal Mall #2
Crystal City, Virginia 22202

EDWIN L. JOHNSON
Director, Developing
Countries Staff
U.S. Environmental Protection
Agency
International Activities
401 M.Street, S.W. (A-106)
Washington, D.C. 20460

BRUCE G. JULIN
E.I. Depont De Nemours & Co.
Barley Mill Plaza
Walker Mill 4-102
Wilmington, Delaware 19898

JOHN P. FRAWLEY
General Manager
Health Environment
Hercules Incorporation
Wilmington

ANNE LINDSAY
Chief, Policy and Special
Projects Office
U.S. Environmental Protection
Agency
Office of Pesticide Programs,
TS-766-C
401 M.Street, S.W.
Washington, D.C. 20460

UNITED STATES OF AMERICA (cont'd)

RICHARD M. PARRY, Jr.
Assistant to the Administrator
USDA/ARS
Building 005 Room 403
Beltsville, Maryland 20705

JOHN R. WESSEL
Director
Contaminants Policy Staff
Office of Regulatory Affairs
Food and Drug Administration
Rockville, Maryland 20857

YUGOSLAVIA
YOUGOSLAVIE
YUGOSLAVIA

SLAVOLJUB LJ. VITOROVIC
Department of Pesticides
Faculty of Agriculture
University of Belgrade
P.O. Box 127
11081 Beograd-Zemün

OBSERVER COUNTRIES
PAYS OBSERVATEURS
PAISES OBSERVADORES

GERMAN DEMOCRATIC REPUBLIC
REPUBLIQUE DEMOCRATIQUE ALLEMANDE
REPUBLICA DEMOCRATICA ALEMANA

WERNER RAFFKE
Ministry of Public Health
Rathausstrasse 3
DDR 1020 BERLIN

SAN MARINO
SAINT-MARIN
SAN MARINO

ALVARO GUARDIGLI, Ph.D.
Consultant on Environmental
Fate and Metabolism of
Xenobiotics
94 Willow Avenue
Somerset, New Jersey 08873
U.S.A.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS (AOAC)

D.C. ABBOTT
33 Agates Lane
Ashtead
Surrey KT21 2ND
United Kingdom

MARGREET LAUWAARS
European Representative
P.O. Box 153
6720 AD Bennekom
The Netherlands

INTERNATIONAL ORGANIZATIONS
ORGANISATIONS INTERNATIONALES
ORGANIZACIONES INTERNACIONALES

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION (EPPO)

I.M. SMITH
Director-General
1, Rue le Nôtre
75016 PARIS
France

EUROPEAN ECONOMIC COMMUNITY

MICHAEL WALSH
Commission of the European Communities
Directorate General for Agriculture
200 Rue de la Loi
1049 Brussels
Belgium

INTERNATIONAL FEDERATION OF NATIONAL ASSOCIATIONS OF PESTICIDE MANUFACTURERS (GIFAP)

M. BLISS
Fermenta Plant Protection
5966 Hensley Road
P.O. Box 8000
Mentor, Ohio 44061-8000
USA

W. DAHMEN
Merck and Co. Inc.,
MSD AGVET Division
P.O. Box 2000
Rahway, N.J. 010065-0912
USA

R.C. DIRKS
Monsanto Agricultural Co.
800 N. Lindbergh Blvd.
St. Louis, MO 63167
USA

G.R. GARDINER
Technical Director
GIFAP
Avenue A. Lancaster 79 A
1180 Bruxelles
Belgium

A. GARNIER
Janssen Pharmaceutica N.V.,
Turnhoutseweg 30 2340 Beerse
Belgium

GIFAP (cont'd)

W. GRAHAM
Uniroyal Chemical Ltd.
Broodlands Farm
Cheltenham Road
Evesham, Worcs. WR1 6LW
England

B. JURIEN DE LA GRAVIERE
Consultant Regulatory
Affairs
Makhteshim Chemical Works
181 Bd Saint German
75007 Paris
France

L.R. HODGES
Rhone-Poulenc Agrochimie
14-20 Rue Pierre-Baizet
69009 Lyon, France

T. KATO
Sumitomo Chemical Co. Ltd.
Agricultural Chemicals
Administration Office
15, 5-Chome, Kitahama
Higashi-Ku, Osaka 541
Japan

S. KOBAYASHI
Hokko Chemical Industry Co. Ltd.,
Mitsui Building
No. 2 Nihonbashi Hongoku-Cho
4-9-20 Chuo-ku,
Tokyo 103 Japan

R. LACOSTE
Rohm & Haas
Independence Mall West
Philadelphia
Pennsylvania 19105
USA

K. LEEMANS
Monsanto Europe S.A.
Avenue de Tervuren 270-272
1150 Brussels
Belgium

M. LENG
Dow Chemical
Agricultural Chemicals
P.O. Box 1706
Midland, MI 48640
USA

M.N. LOUIS
Pennwalt Holland
Postbus 7120
3000 HC Rotterdam
Holland

GIFAP (cont'd)

T. MATSUDA
Sumitomo Chemical Co. Ltd.
Takarazuka Laboratory
4-2-1 Takatsukasa
Takarazuka, Hyogo 665
Japan

R.J. NIELSSON
American Cyanamid Co.
P.O. Box 400
Princeton, N.J. 08540 USA

S. OGAWA
Mitsui Toatsu Chemicals Inc.
2-5 Kasumigaseki, 3-Chome
Chiyoda-Ku, Tokyo 100
Japan

A. PELFRENE
DuPont de Nemours
137 Rue de l'Université
75007 Paris
France

F.J. RAVENEY
P.O. Box 554
7 Rue Muzy
1211 Geneva 6
Switzerland

S.F. RICKARD
Merck & Co.,
Hillsborough Road
Three Bridges, N.J. 08887
USA

R. RIMPAU
Hoechst A.G.,
Postfach 800 320
6230 Frankfurt 80
F.R. Germany

R.R. ROWE
Dow Chemical Co. Ltd.
Letcombe Manor,
Letcombe Regis,
Oxon. OX12 9 JT
Great Britain

T. SHIMOMURA
Kumiai Chemical Industry
4-26, Ikenohata, 1-Chome
Taito-Ku, Tokyo 110
Japan

GIFAP (cont'd)

C.W. SIMON
ANDEF
Rua Capitao A. Rosa 376
13 Andar. Edificio PBK
Jardim Paulistano
01443 Sao Paulo SP
Brazil

S. SUGIMOTO
Nippon Soda Co. Ltd.
Shin-Ohtemachi Building
3rd Floor
2-1, 2-Chome, Chiyoda-Ku
Tokyo 100
Japan

B. THOMAS
Schering A.G.,
Chesterford Park Research
Station
Saffron Walden
Essex CB10 1XL
Great Britain

J. THORNTON
Mobay Chemical
P.O. Box 4913
Kansas City
Missouri 64120
USA

P. VERMES
Pennwalt France
1 Rue de Frères Lumière
78372 Plaisir
France

A. WEHRSTEIN
Monsanto Ges.m.b.H.
Am Stadtpark A-1030
Vienna
Austria

K.E. WHITAKER
Shell International
Chemical Co.,
Shell Centre
London SE1 7PG
Great Britain

A.P. WUNDERLI
Chevron Chemical Co.,
Ortho Research Centre
15049 San Pablo Ave.
Richmond, CA 94804
USA

INTERNATIONAL DAIRY
FEDERATION (IDF)

W. HEESCHEN
Bundesanstalt für Milchforschung
Hermann-Weigmann Strasse 3/II
Postfach 6069
D-2300 KIEL
F.R. GERMANY

INTERNATIONAL ORGANIZATION
FOR STANDARDIZATION (ISO)

H.W. SCHIPPER
Head, Food and Agriculture
Department
Nederlands Normalisatie
Instituut
P.O. Box 5059
2600 GB Delft
The Netherlands

INTERNATIONAL UNION OF PURE
AND APPLIED CHEMISTRY (IUPAC)

H. FREHSE
Bayer AG, PF-F/CE-RA
Pflanzenschutzzentrum Monheim
D-5090 Leverkusen-Bayerwerk
Federal Republic of Germany

FAO/WHO SECRETARIAT
SECRETARIAT FAO/OMS
SECRETARIA FAO/OMS

H. GALAL GORCHEV
Environmental Hazards & Food
Protection
World Health Organization
CH-1211 Geneva 27
Switzerland

JOHN L. HERRMAN
International Programme on
Chemical Safety
World Health Organization
1211 Geneve 27
Switzerland

F.-W. KOPISCH-OBUCH
Plant Protection Service
Plant Production and Protection
Division
FAO, 00100 Rome
Italy

L.G. LADOMERY (Secretary)
Joint FAO/WHO Food Standards
Programme
FAO, 00100 Rome Italy

FAO/WHO SECRETARIAT (cont'd)

A.F. MACHIN
Boundary Corner
2 Ullathorne Road
London, SW16 1SN
United Kingdom

A.W. RANDELL
Joint FAO/WHO Food Standards
Programme
FAO, 00100 Rome
Italy

NETHERLANDS SECRETARIAT
SECRETARIAT PAYS-BAS
SECRETARIA PAISES-BAJOS

J.A.R. BATES
5, Manor Park Drive
Westoning
Bedfordshire, MK45 5LS
United Kingdom

A.F.H. BESEMER
Hartenseweg 30
6705 BJ Wageningen
The Netherlands

J.W. DORNSEIFFEN
Ministry of Welfare, Health
and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk
The Netherlands

P. HAKKENBRAK
Ministry of Welfare,
Health and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk
The Netherlands

G.J.B. KOENEN
Ministry of Welfare,
Health and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk
The Netherlands

L.J. SCHUDDEBOOM
Ministry of Welfare, Health
and Cultural Affairs
Foodstuffs Division
Postbox 5406
2280 HK Rijswijk
The Netherlands

Opening speech at the 20th CCPR by Ir.Drs. R.B.J.C. van Noort, Director-General of the National Institute of Public Health and Environmental Hygiene of The Netherlands

Ladies and Gentlemen,

It is tempting, on the occasion of the opening of the 20th Session of the CCPR, to dwell on what has happened in the field of pesticides, since 1965 when this Committee met for the first time. I have to resist this temptation , however. There are few industrial subjects that have attracted such strong and persistent public attention. Everything that had and has to do with radiation belongs to that category. But pesticides follow closely after. The first Session of the CCPR took place during a time in which this public interest showed its first signs. Public interest generates political interest and action, and this mutually stimulating process is still continuing today. It would be impossible, therefore, and also outside the aim of an opening speech to try to give a historical survey of the subject. Nevertheless, I would like to highlight a few points.

Nobody will deny the logical connection between a question and its answer. But there is also the inverse connection: an answer can generate further questions. This has proved particularly true for pesticides. I think that pesticides are the best investigated group of all chemicals on the market. This is not only true today but it was true even back in the early sixties. The data base on which pesticides were registered in that period, however, is often extremely meager in our eyes compared with today's standards. This is not only a consequence of the inverse connection I just referred to: the growing public and consequently, the political interest in pesticides generating new questions after every new answer. There is also the aspect of the rapid development of technological means that made it possible for these new questions to be answered.
The progress in analytical technology, for example, enabled the detection of continuously smaller residues of pesticides and their metabolites. These past weeks we have seen big headlines on the front pages of our papers: poison in Amsterdam tap water. What was the poison? Two pesticides: atrazin and bentazon.
Are they poisons? Yes, if consumed above certain quantities.
And how much is too much? Is 0.5 microgram per liter too much? And how can the reader know? The lowest figures Codex recommends for any pesticide residue in food are at least a factor of 10 higher and, although the consumption factor of food is different, I am still afraid that the message that some ppb's have been found is more disturbing to the general public than the information that no ppm's could be discovered.

The question of how far analytical possibilities should actually be pushed has to be answered by taking into account the data on toxicity. Developments have continued also in the area of toxicology.
There is no doubt that today's toxicological investigations permit the detection of effects that would not have been seen twenty years ago. It is useful to quote here the UK toxicologist Barnes who said that toxicology can be compared with archaeology in Greece: "Wherever you start to dig you find something of interest". Here, as well as in the case of analytical capabilities, a new answer calls for a new question, namely, how much does this more refined knowledge contribute to safety.

About a month ago rumours circulated in The Netherlands about the existence of a location where in around 1970 large quantities of toxic materials had been dumped illegally. The local authorities, not aware of this, had transformed the area into a golf course. As a first reaction the golf course was closed for a few days while investigations were started to see whether the rumours about the dumping of toxic chemicals were true.
I do not want to underestimate the potential danger caused by uncontrolled dumping of chemicals. Nevertheless a number of questions have to be answered before the risks involved can be estimated. Two main factors should be investigated. In the first place, how toxic are the dumped chemicals for man and the environment? And secondly, what are the possible routes of exposure? The closing of the golf course is a spectacular act demonstrating that authorities are able to take immediate action for the protection of health. It is an open question, however, how much harm can be caused to people playing their favorite sports where a few feet under the surface toxic chemicals are present.

Comparable situations exist with pesticides. Pesticides are toxic to certain organisms; they have to be, in order to be effective. Their toxicity, however, is almost always confined to certain forms of life, to certain insects or to certain weeds or certain fungi. They are effective only if they are used above certain quantities and sometimes their use has to be repeated to be effective. In addition, the chemical has to reach the target (or the target the chemical) in order to be effective. In estimating the risks for consumers eating food treated with pesticides, the following considerations should be taken into account: what is the quantity of the pesticide at which it starts to be toxic to man?
Is there any chance that the residue of the pesticide or its metabolites reaching the consumer exceed this quantity?
The work done recently by an FAO/WHO Expert group on the prediction of exposure to pesticide residues may be helpful in this regard. Their report is part of your agenda. The outcome of many studies governments have carried out on the presence of pesticides in food or their intake by consumers have invariably been reassuring. New information will be supplied to your meeting on this point. But it has happened repeatedly in the past that ADIs had to be lowered or even withdrawn. This does not automatically mean immediate danger for the consumer. It is however a justification of the policy followed by your Committee through the years to set MRLs at the lowest level consistent with registered use. This means that the intake should stay as far below the ADI as is reasonably possible. In this way an extra safety factor is added to those already incorporated in the ADI.
The approach followed by your Committee in this respect should be the one generally recognized by Codex.
If it is stated that for the CCPR there exists no connection between the ADI and the MRL, this only means that even if the ADI offers room for higher figures, the MRL is never established at a level higher than justified by Good Agricultural Practice. At the time this speech was written it was not known what would be the outcome of the discussions of the symposium held this morning on this subject. I think, however, that this important and basic notion should be regularly underlined and reviewed if necessary. Even if it is concluded that no changes in the definition of GAP are necessary, such an exercise enables the meeting to reconfirm the philosophy behind the use of pesticides and control of the resulting residues in food.

I have touched on three aspects: analytical chemistry, toxicology and exposure. Using these three areas as examples it can be stated that research, triggered by pesticides, has contributed enormously to our knowledge. It has been possible to eliminate several pesticides causing health or environmental problems and to adjust the use of others. I dare say that today's pesticides, if used according to instructions, are safe. But the other effect is that public opinion, not being able to see the data in perspective, continues to see pesticides as health threatening instead of health promoting and food saving compounds. In this regard pesticides have to carry the burden of being pioneers fighting their way in ever-expanding fields of knowledge.

Your policy, no MRL without an ADI, limitation of the MRL as far below the ADI as possible, combined with a critical approach of what is to be considered Good Agricultural Practice on a global scale has proved to be valuable and merits understanding.

This practice also complies fully with the great aims of the Codex Alimentarius Commission: the protection of the consumer and the facilitation of trade. I am convinced that these considerations have formed the background of the action of the man who has chaired this Committee since 1974 and who has indicated that this 20th Session will be his final one.

Here and from this place, I wish to express my sincere thanks to Mr. Pieters and his collaborators for the excellent job he (and they) have performed during all these years. He most certainly gave face to your Committee, gave guidance and spirit to your Sessions and developed this Committee to an important international body that is recognized all over the world. My country will continue to bear responsibility for the CCPR and we will do everything to ensure its success in the future. However, you, present Chairman, will have to find another chair.

For the time being I wish you all and him a very fruitful and memorable 20th Session.

REPORT OF THE AD-HOC WORKING GROUP ON METHODS OF ANALYSIS[1])

The Group met under the Chairmanship of Mr. J.W. Dornseiffen (Saturday, 16 April) and Mr. P.A. Greve (Wednesday 20 April and Thursday 21 April). The following participated:

Australia
Belgium
Canada
Finland
France
Germany, Fed.Rep.
Ireland
Netherlands
Poland
Portugal
San Marino
Spain
Sweden
Switzerland
Thailand
United Kingdom
United States of America
AOAC
IUPAC

Agenda

1. The Working Group discussed the following points:
- answers to the questionnaire set up last year;
- up-dating of recommendations for methods of analysis;
- limits of determination;
- methods of analysis for PCBs;
- Analytical Quality Assurance (AQA).

Answers to the questionnaire for methods of analysis

2. The Working Group had before it a summary of the answers to the questionnaire issued last year (ALINORM 87/24A, par. 244-245). The Group agreed that the document (Room document 10) be brought to the attention of the Plenary Session for information.

Up-dating of recommendations for methods of analysis

3. The Working Group undertook the up-dating and reviewing of the recommendations for methods of analysis given at the previous Session. The changes are given in Annex I to the report of the Working Group distributed during the Session; in this version, use has been made of the answers to the questionnaire mentioned above.
Before the next Session, the Chairman of the Group will send out a list of references which were not mentioned by the respondents to the questionnaire and which are, therefore, likely to be outdated or sufficiently covered by manuals. If no support is given in favour of keeping a given reference in the list, it will be deleted at the next Session.
After this review, the Chairman will try to find means to make the references more informative, i.e. by including information on commodities covered and on methodology used. Inclusion of the full title of the paper could also be envisaged, if practicable.[2])

Limits of determination

4. The Working Group discussed questions brought up by the delegation of The Netherlands with regard to the limit of determination for a number of compounds. The Group agreed that proposals for changes in limits of determination be brought to the attention of the Joint Meeting for reconsideration in connection with a reappraisal of the compound concerned.

1)See paras 208-213, ALINORM 89/24
2)Will be published as an up-date of Part 8 of the Guide to Codex Recommendations concerning Pesticide Residues.

The Group reconfirmed, in this connection, the Codex definition of limit of determination, i.e.:
"The lowest concentration that can be identified and quantitatively measured in a specified food, agricultural commodity or animal feed with an acceptable degree of certainty by a regulatory method of analysis".
The limit of determination defined in this way can be taken for practical purposes as synonymous to the limit of quantitation (LOQ) defined by the ACS Committee on Environmental Improvement (Anal. Chem., 55, 712A-724A (1983)).
The concept of a separate "limit of detection" is, in the opinion of the Working Group, not usually relevant to the work of CCPR. The concept of lower practical level (LPL), as defined at the previous Session, can be helpful however (cf. Annex II to APPENDIX III, ALINORM 87/24A).

Methods of analysis for PCBs

5. The Working Group had been asked by the Working Group on Contaminants to address the matter of methods of analysis for PCBs. The Group noticed that assessed methods of analysis for PCBs were available and that a Joint AOAC/NMKL (Nordic Committee for Food Analysis) collaborative study was being organised by Mr. K. Himberg.

Analytical Quality Assurance (AQA)

6. Analytical Quality Assurance is receiving much attention throughout the world, and is important in pesticide residue analysis. The Group felt the necessity of a discussion on AQA at the next Session, taking note of the paragraphs on this subject in the Codex document on Good Analytical Practice (CAC/PR, Part 7). References to relevant matters will be sent before 15 May, 1988, to the Chairman of the Group, who will send the combined references to the members within one month.

List of compounds scheduled for evaluation or re-evaluation by the[1] 1988-1991 JMPR.

	Toxicological evaluation	Residues evaluation	
JMPR 1988	acephate	aldicarb	
	bromide ion	bitertanol	
	butocarboxim	bromide ion	
	cyhexatin	carbendazim/benomyl/	
	dimethipin	thiophanate-methyl	
	ETU	carbosulfan	
	fenitrothion	clorothalonil	
	methacrifos	cyhalothrin	
	paclobutrazol*	cypermethrin	
	"d-phenothrin"	deltamethrin	
	tolylfluanid*	diflubenzuron	
	vamidothion	etrimfos	
	vinclozolin	fenvalerate	
		isofenphos	
		methiocarb	
		methoprene	
		paclobutrazol*	
		permethrin	
		phosmet	
		prochloraz	
		thiodicarb/methomyl	
		thiram	
		tolylfluanid*	
		triadimefon	
		vinclozolin	
JMPR 1989	anilazine*	anilazine*	tentative
	azocyclotin	clofentezine	for
	daminozide	cyfluthrin	residues
	demeton-S-methyl	daminozide	
	demeton-S-methyl sulphone	endosulfan	
	dinocap	fenthion	
	endosulfan	flusilazole*	
	ethion	lindane	
	flusilazole*	metalaxyl	
	lindane	methomyl	
	methomyl	permethrin	
	oxydemeton-methyl	phoxim	
		prochloraz	
	procymidone	procymidone	
	propoxur	terbufos*	
	terbufos*	thiram	
	triadimenol*	triadimenol*	
	triazolylalanine*	triazolylalanine*	
JMPR 1990 (tentative)	captan	azinphos-methyl	
	chlorothalonil	captan	
	chlorpropham*	chlorpropham*	
	coumaphos	coumaphos	
	cyromazine*	cyromazine*	
		disulfoton	

*New evaluations. All other are re-evaluations.
[1]Paras 245-256, ALINORM 89/24

	Toxicological evaluation	Residues evaluation
JMPR 1990 (tentative) (contd.)	folpet hexaconazole* 2-phenylphenol (ortho-phenylphenol) profenofos* propham* triazophos	folpet hexaconazole* phoxim profenofos* propham* triazophos
JMPR 1991 (tentative)	bioresmethrin dialifos ethephon hexythiazox* pyrazophos	hexythiazox* parathion

*New evaluations. All other are re-evaluations.

PROPOSED DEFINITIONS[1]

Good Agricultural Practice in the use of Pesticides (GAP) is the nationally recommended, authorized or registered safe use of pesticides under actual conditions at any stage of production, storage, transport, distribution and processing of food commodities and animal feed necessary for effective and reliable pest control. It encompasses a range of levels of pesticide application up to the highest nationally recommended, authorized or registered use. In this context, "safe use" takes into account public and occupational health and environmental considerations and the minimum quantities for effective pest control, applied in a manner so as to leave a residue which is the smallest amount practicable.

Maximum Residue Limit (MRL) is the maximum concentration of a pesticide residue (expressed as mg/kg), recommended by the Codex Alimentarius Commission to be legally permitted in or on food and animal feed commodities.

Explanatory Note:
Codex MRLs, which are primarily intended to apply in international trade, are derived from:

(1) estimations made by the JMPR following
    a) toxicological assessment of the pesticide and its residue and estimation of an acceptable daily intake (ADI);
    b) review of residue data from supervised trials reflecting national good agricultural practices. In order to accomodate variations in national pest control requirements, Codex MRLs take into account the higher levels shown to arise in such supervised trials which are considered to represent effective pest control practices;

(2) consideration of the various dietary residue intake estimates and determinations both at the national and the international level in comparison with the ADI, which should indicate that foods complying with Codex MRLs are safe for human consumption.

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[1]Submitted for Government comments and consideration by the JMPR (see para 22, ALINORM 89/24).