codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Via delle Terme di Caracalla 00100 ROME Tel.: 52251 Telex: 625825-625853 FAO I Cables: Foodagri Rome Facsimile: (6)5225.4593

ALINORM 95/24A

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Twenty-first Session
Rome, 3-8 July 1995

REPORT OF THE TWENTY-SEVENTH SESSION OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES

The Hague, The Netherlands
24 April - 1 May 1995

Note: This document incorporates Codex Circular Letter 1995/13-PR.

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CX 4/40.2

CL 1995/13 -PR
May 1995

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

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

SUBJECT: **Distribution of the Report of the 27th Session of the Codex Committee on Pesticide Residues (ALINORM 95/24A)**

The report of the 27th session of the Codex Committee on Pesticide Residues (CCPR) will be considered by the 21st Session of the Codex Alimentarius Commission, to be held in Rome from 3-8 July 1995.

PART A: MATTERS FOR ADOPTION BY THE 21ST SESSION OF THE CODEX ALIMENTARIUS COMMISSION

The following matters will be brought to the attention of the 21st Session of the Codex Alimentarius Commission for adoption or endorsement:

1. **Draft MRLs at Step 8, Proposed Draft MRLs at Step 5 and Deletion of Codex MRLs** (ALINORM 95/24A-Add.1)

2. **Draft Recommended Method of Sampling for the Determination of Pesticide Residues in Milk, Milk Products and Eggs** (ALINORM 95/24A, Appendix II)

3. **Revised List of Methods of Analysis for Pesticide Residues** (ALINORM 95/24A, Appendix III)

Governments wishing to propose amendments or to comment on the above items 2 and 3 should do so in writing in conformity with the Guide to the Consideration of Standards at Step 8 of the Procedure for the Elaboration of Codex Standards Including Consideration of Any Statements Relating to Economic Impact (*Codex Alimentarius Procedural Manual*, Eighth Edition, pp. 33-35) to the Chief, Joint FAO/WHO Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, not later than 30 June 1995.

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

1. EXPRESSION OF MRLS FOR FAT-SOLUBLE PESTICIDES IN MEAT

Governments and interested international organizations are invited to send comments on the recommendation, as contained in paragraph 181 of ALINORM 95/24, to the Chief, Joint FAO/WHO

Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, not later than 31 December 1995.

2. METHODS OF ANALYSIS

Governments, manufacturers and concerned international organizations are invited to provide information on methods of analysis for pesticides, especially for cycloxydim (179), ethofenprox (184), clethodim (187) and teflubenzuron (190). Information on methods of analysis available in the open literature is requested.

Information is also requested on analytical data and limit of determination for methidathion (051), disulfoton (074) and abamectin (177).

Comments should be sent to the chairman of the *ad hoc* Working Group on Methods of Analysis, Dr. P. van Zoonen, National Institute of Public Health and Environmental Hygiene, P.O. Box 1, 3720 BA Bilthoven, The Netherlands, not later than 31 December 1995.

3. INCLUSION OF FURTHER PESTICIDES IN THE CODEX PRIORITY LISTS

Governments wishing to propose pesticides for inclusion on the Codex Priority List are requested to forward comments to Ms. Janet K. Taylor, Director, Plant Industry Directorate, food Production and Inspection Branch, Agriculture and Agri-Food Canada, Ottawa, Ontario, K1A 0C5 Canada, with a copy to Chief, Joint FAO/WHO Food Standards Programme (for address see Part B1).

4. AMENDMENTS TO SECTIONS 2B AND 2C OF THE PERIODIC REVIEW PROCEDURE

Governments and interested international organizations are invited to send comments on the amendments, as contained in CRD 11 for the 27th Session, to Mr. F. Ives, Health Effects Division (7509C), Office of Pesticide Programs, US Environmental Protection Agency, 410 M Street, S.W., Washington, D.C. 20460, USA, not later than 31 December 1995.

5. MONITORING DATA AND INFORMATION ON EMRL SETTING

The 26th CCPR discussed the need for establishing criteria for the use of monitoring data to elaborate EMRLs and agreed to invite governments to submit to the JMPR information on how monitoring data were used in establishing EMRLs at national level (data requirements, methods of evaluations, statistical treatment, etc.). The Committee also agreed to invite governments to provide monitoring data on the pesticides on the EMRL list, including data indicating that no residues were detected as the importance of this type of information as well as of data on detected residue levels was noted.

The 27th CCPR also requested member countries to send details of their basic policies on the establishment of EMRLs and agreed that it continue to collect monitoring data (para. 176).

Information and data should be sent to Mr. Bill Murray, FAO Joint Secretary of the JMPR, Plant Protection Service, AGP, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, with a copy to Dr. W.H. van Eck, Chairman of the CCPR, Ministry of Health, Welfare and Sport, Postbox 3008, 2280 MK Rijswijk, not later than 31 October 1995.

6. RESIDUES AND TOXICOLOGICAL DATA REQUIRED FOR EVALUATION BY THE JOINT FAO/WHO MEETING ON PESTICIDE RESIDUES (JMPR)

(i) Pesticides Scheduled for Evaluation or Periodic Re-evaluation by the JMPR and Those for Which MRLs Are Being Elaborated

Governments and interested international organizations are invited to send inventory of data for pesticides on the agenda of the JMPR. **Inventories** of information on use patterns or good agricultural practices, residue data, national MRLs, etc. should be sent to Mr. Bill Murray (for address see Part B.5) well before 30 November of a year before a JMPR meeting where a pesticide of concern is scheduled to be evaluated and, **submission of residue** data should be well before the end of February of the same year as the JMPR meeting. Toxicological data should be sent to Dr. J.L. Herrman, International Programme on Chemical Safety, WHO, CH- 1211 Geneva 27, Switzerland not later than one year before the JMPR meeting (see Appendix IV of ALINORM 95/24A).

Those countries specified under individual compounds concerning matters related to the FAO Panel of the JMPR (GAP, residue evaluation, etc.) on specific pesticide/commodity(ies) or concerning toxicological matters are invited to send information of data availability and/or toxicological data (for deadlines see paragraph above).

For the following pesticides governments and interested international organizations are invited to send **information on data availability** on matters specified below to Mr. B. Murray (GAPs, residue data, residue definition) or to Dr. J.L. Herrman (toxicological data), with a copy to the Chief, Joint FAO/WHO Food Standards Programme (for address see Part B.1), in time for relevant JMPR evaluation (see paragraphs above and Appendix IV of this report):

Chlormequat (015)	Toxicological data. The 1994 JMPR withdrew the ADI calling into question the validity of the CXLs. These CXLs will be considered at the next session (para. 70);
Diazinon (022)	Animal transfer studies from almond hulls and maize forage to meat and milks (paras. 72, 75, 76);
Dichlorvos (025)	GAPs and residue data for peanut (para. 82) and mushrooms and poultry meat;
Fentin (040)	GAPs and residue data for pecan (para. 91)
Propineb (083)	GAPs and availability of data to elaborate individual MRLs (para. 116);

The 28th CCPR will consider deletion of all CXLs for the following pesticides:

Trichlorfon (066) (para. 104); **Etrimfos (123)** (para. 130).

(ii) Acute Dietary Risk

The CCPR was invited by the JMPR to seed advice from JMPR on specific pesticide/commodity combinations concerning "acute dietary risk". Governments and interested international organizations are invited to send information on those specific pesticide/commodity combinations which may pose acute dietary risk to Dr. J.L. Herrman (for address see Part B6(i)) with a copy to the Chairman of the CCPR (for address see Part B.5), **not later than 30 November 1995**.

7. INTAKE DATA

The 26th Session of the CCPR decided to keep draft MRLs which might give rise to potential intake concern at Step 7C for a period of one year, requesting governments to provide intake calculation, preferably EDI calculation to WHO.

The 27th CCPR decided to keep at Step 7C for another year those draft MRLs which might give rise to intake concern and had been held at the Step since the last session. Member countries, especially those expressing intake concerns, are invited to submit their intake calculations, preferably EDI calculations, to the Chairman of the CCPR (for address see Part B.5) with a copy to Dr. G. Moy, Food Safety Unit, WHO, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland, not later than 30 November 1995.

The Committee also invited member countries to provide information on their national procedures for estimating the dietary intake of pesticide residues, indicating any divergence from the existing UNEP/FAO/WHO Guidelines (para. 191) to the Chairman of the CCPR (for address see Part B.5) with a copy to the Chief, Joint FAO/WHO Food Standards Programme (for address see Part B.1) not later than 31 December 1995.

8. INFORMATION ON NATIONAL DIETS

At the 26th CCPR, the need for revision of a regional and global diets was raised. Governments are once again invited to provide national diet or national food consumption data to Dr. G. Moy (for address see Part B.6), not later than 30 November 1995.

SUMMARY AND CONCLUSIONS

The Twenty-seventh Session of the Codex Committee on Pesticide Residues reached the following conclusions:

MATTERS FOR CONSIDERATION BY THE COMMISSION:

- Recommended for adoption **Draft MRLs** at Step 8 and **Proposed Draft MRLs** at Step 5 as contained in ALINORM 95/24A - Add.1;
- Agreed to advance the **Draft Recommended Method of Sampling for the Determination of Pesticide Residues in Milk, Milk Products and Eggs** as amended to Step 8 for adoption (Appendix II, paras. 193-194);
- Accepted the revised list of **Methods of Analysis for Pesticide Residues** as amended and agreed to submit the list for endorsement (Appendix III, para. 196);
- Decided to seek approval of Commission to initiate the revision of the existing Recommended Methods of Sampling for Determination of Pesticide Residues (para. 200); and
- Recommended for endorsement **Priority List** of Pesticides for new and periodic evaluations by the JMPR (Appendix IV).

OTHER MATTERS OF INTEREST TO THE COMMISSION:

- Decided to keep at Step 7C for another year those draft MRLs which might give rise to intake concern and had been held at the Step since the 26th CCPR, and invited governments, especially those expressing intake concerns, to submit their intake calculations, preferably EDI calculations, to the Chairman of the CCPR and WHO (para. 58-59);
- Agreed to consider the amendments of Sections 2B and 2C of the Periodic Review Procedure prepared by the USA at the next session (para. 67);
- Agreed to collect details of national policies on the establishment of EMRLs and to continue collecting monitoring data (para. 176);
- Agreed to seek government comment on the recommendation on the expression of MRLs for fat soluble pesticides in meat, as contained in paragraph 181, for consideration at the next session and to discontinue the consideration of Expression and Application of MRLs for Fat Soluble Pesticides in Meat, Animal Fat and Edible Offal except the above (para. 181-182);
- Reconfirmed that the coordination of efforts to avoid duplication between the respective bodies dealing with residues of pesticides and veterinary drugs continue to be addressed by the JECFA/JMPR and Codex Secretariats, where necessary (para. 183-185);
- Discussed the proposed CCPR procedure for proposed MRLs whose TMDI/EMDI calculations may exceed the ADI, and agreed that a revised draft be circulated for comment prior to the next session and the proposed procedure and the related papers be forwarded to the FAO/WHO Consultation held in York (UK) (para. 187-191);

SUMMARY AND CONCLUSIONS (cont.d)

- Agreed that manufacturers be urged to provide information on the conservative Limits of Determination suitable for regulatory monitoring using multi-residue analysis in addition to that provided for registration using specific methods of analysis (para. 198);

- Agreed that the Questionnaire for Information on Pesticides in Current Use in Developing Countries be circulated for suggestion for improvements and a revised questionnaire would be considered at the next session (para. 204);

- Agreed that the Selection Criteria for the Prioritization and Scheduling of Compounds for JMPR Review would be further discussed at the next session (para. 208); and

- Agreed to Summary Status of Work by the CCPR (para. 212).

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INTRODUCTION

1. The Codex Committee on Pesticide Residues (CCPR) held its 27th Session in The Hague, The Netherlands, from 24 April - 1 May 1995. Dr. W.H van Eck of The Netherlands Ministry of Health, Welfare and Sport chaired the Session. The Session was attended by 57 Codex member countries and 10 international organizations. The list of participants is attached as Appendix I to this Report.

OPENING OF THE SESSION (Agenda Item 1)

2. The Session was opened by Mrs. Erica Terpstra, State Secretary of Health, Welfare and Sport. She welcomed the Committee to The Hague on the occasion of its 27th Session. In her opening address, Mrs. Terpstra highlighted the increased significance of Codex standards for settling trade disputes between countries in the framework of the World Trade Organisation, as laid down in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) of the GATT. She stressed the need of speeding up the standard-setting process within the CCPR, based on the recommendations of the FAO/WHO Joint Meeting on Pesticide Residues (JMPR), which should be encouraged to further improve the transparency of their decisions. With reference to the increased importance of incorporating reliable risk assessment procedures in the process of MRL setting, the State Secretary mentioned a consultation which had recently been convened in Geneva on this subject, as well as a future consultation which was to be organized in York (UK) to update current Guidelines for the Predicting Dietary Intake. Mrs. Terpstra informed the Committee of the wish of Executive Committee to shorten the length of Codex meetings, including those of the CCPR, which would significantly influence the way of conducting future meetings.

3. In reply to these remarks the Chairman thanked Mrs. Terpstra for her interesting words. The Chairman noted that the CCPR was fully aware of the implications the above mentioned issues could have for the work of CCPR.

ADOPTION OF THE AGENDA (Agenda Item 2)

4. The Provisional Agenda[1] was adopted by the Committee, with the understanding that although Australia proposed to withdraw item 10 and therefore CX/PR 95/8 had not been prepared, this item should be discussed briefly at this session. Furthermore, it decided to discuss the length of future meetings under Agenda item 15.

5. The Committee agreed to the attendance of a representative of Food Chemical News, provided that the participation would be limited to taking written notes of the proceedings.

APPOINTMENT OF RAPPORTEURS (Agenda item 3).

6. Mr C.W. Cooper (USA) and Mr J.R. Mascall (UK) were appointed to act as rapporteurs to the Committee.

MATTERS OF INTEREST (Agenda Item 4)

MATTERS OF INTEREST ARISING FROM OTHER CODEX COMMITTEES (Agenda Item 4(a))[2]

7. The Committee was informed that the 41st Session of the Executive Committee of the Codex Alimentarius Commission endorsed the priority list as recommended by the 26th Session of the CCPR. The Committee noted that matters, other than the following, referred to in the document were for information only or else would be taken up at appropriate points of the agenda.

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1 CX/PR 95/1

2 CX/PR 95/2

Sulphur dioxide

8. The Codex Committee on Tropical Fresh Fruits and Vegetables (CCTFFV) had referred to this Committee establishment of a specific limit of sulphur dioxide in litchi[3]. The Codex Committee on Food Additives and Contaminants (CCFAC) held in March 1995 had already considered this issue and agreed that this issue had fallen within the terms of reference of the CCFAC. However, no action had been taken as no level had been proposed by the CCTFFV.

Ethylene oxide

9. The Codex Committee on Food Hygiene (CCFH) had requested the CCFAC to recommend a maximum level of residues of ethylene oxide in spices and aromatic plants resulting from fumigation[4]. However, no data were available from the CCFH. The CCFAC had agreed that this issue should have been dealt with by the CCPR. The Observer from the European Community (EC) informed the Committee that ethylene oxide was banned in the EC for plant protection uses and that an MRL was in the process of being agreed by member states at the limit of determination to reinforce this. The EC undertook to send the report of its Scientific Committee to the JMPR.

MATTERS OF INTEREST ARISING FROM WORK OF OTHER BODIES IN THE FIELD OF PESTICIDE RESIDUES IN FOOD (Agenda Item 4b)

Joint Meeting on Pesticides (JMP)

10. The WHO Representative announced the availability of the report of the 1994 meeting of the Core Assessment Group of the JMP which had been published by the International Programme on Chemical Safety[5]. Environmental Health Criteria (EHC) documents on five pesticides were reviewed at the meeting, which would be published in the near future. Tolerable intakes carrying the same values as ADIs having been earlier established by the JMPR were allocated to chlorothalonil, diflubenzuron and methomyl. Since these were comprehensive reviews of the currently available toxicological databases on these pesticides, WHO was of the view that they should be considered as satisfying the requirements for the CCPR's periodic review programme.

Joint FAO/WHO Expert Consultation on the Application of Risk Analysis to Food Standards Issues

11. The WHO Representative provided a report on the recent Expert Consultation held at WHO Headquarters, 13-17 March 1995. The consultation was convened at the request of the 41st Session of the Executive Committee to promote the rapid integration of risk analysis into the Codex process.

12. The consultation first agreed on a number of definitions for risk analysis terms related to foodborne risks, which included both chemical and biological hazards. The consultation also agreed upon a model for risk assessment which consisted of four components: 1) hazard identification; 2) hazard characterization; 3) exposure assessment; and, 4) risk characterization. The consultation did not discuss risk management or risk communication, but recognized that they had a number of important interfaces with risk assessment.

13. The consultation considered the risk analysis process currently used by Codex and offered a number of recommendations to foster a harmonized approach with Codex, consistent with science-based risk assessment. In this regard, the consultation considered that better information was required to conduct risk assessment and that Codex should make every effort to obtain that information.

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3 ALINORM 95/35, paras. 14, 36-37
4 ALINORM 95/13, paras. 81, 83
5 WHO/PCS/95.7

14. The consultation also considered ways in which uncertainty was associated with risk assessment as the process inevitably led to an estimate of human risk, which was often expressed quantitatively. In reality, such estimates were bounded by a high degree of uncertainty and risk managers must understand the nature of that uncertainty when weighing risk management options.

15. The Chairman reported that he attended the consultation as an observer and noted that the consultation addressed recommendations to pesticide residues, including that the process of establishing MRLs be made more transparent and that exposure assessment guidelines be improved.

World Health Organization (WHO)

16. The WHO Representative informed the Committee of WHO activities in the field of human health[6].

AOAC International

17. The Observer from AOAC reported that Methods of Analysis of AOAC International, 16th edition, had been published in loose leaf form in January 1995 and the CD-ROM version would also be available in July. Separate chapters such as one for pesticides may be available in future.

International Union of Pure and Applied Chemistry (IUPAC)

18. The Observer from IUPAC reported that the Eighth International IUPAC Congress of Pesticide Chemistry was held from 4-9 July 1994 in Washington, DC[7] and the Ninth Congress would be held from 2-7 August 1998 in London, UK. The Committee was informed of projects of the IUPAC Commission on Agrochemicals which included: effects of storage and processing on pesticide residues in plant products; use of isolated cells to study the metabolism of agrochemicals in animals; detection and significance of biologically activated metabolites of agrochemicals in animals and man; optimum use of available residue data in the estimation of dietary intake of pesticides; and immunoassays for residue analysis of agrochemicals.

Consumers International

19. The Observer from Consumers International requested that the CCPR incorporate the recommendations made by the US National Academy of Sciences[8] concerning dietary intakes of pesticide residues by infants and children. The Committee was informed that the USA intended to implement the recommendations to the extent possible although funding was a problem. The JMPR had already discussed them in 1993.

REPORT ON GENERAL CONSIDERATIONS BY THE 1994 JOINT FAO/WHO MEETING ON PESTICIDE RESIDUES (Agenda Item 5)[9]

20. A total of 46 pesticides were evaluated; 13, toxicological evaluations and 39, residues evaluations. The following *General Consideration* items were summarized by the Joint Secretaries of JMPR.

2.2 Assessment of acute dietary risk

21. Considerable discussion led to the concept of the "acute reference dose", and specific examples would be considered at the next Meeting. CCPR is invited to seek advice from JMPR on specific pesticide/commodity combinations.

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6 Conference Room Document (CRD) 9

7 "IUPAC 8th International Congress of Pesticide Chemistry"

8 "Pesticides in the Diets of Infants and Children" National Academy of Sciences, National Academy Press, 1993

9 1994 JMPR Report, Section 2

2.3 Toxicological endpoints for pesticides present in the environment as unavoidable contaminants

22. It was not considered appropriate to maintain ADIs for those pesticides for which Extraneous Maximum Rresidue limits (EMRLs) had been applied, because studies with adequate power to detect toxic effects had not been performed on most of them. At the same time it was useful to maintain a numerical toxicological endpoint to serve as a guideline with which potential dietary intakes could be compared. For these reasons, the Meeting converted the ADIs for each of these pesticides to *provisional tolerable daily intakes (PTDIs).*

2.4 Definition of a minimum database

23. The FAO Panel considered the question of minimum database and further elaborated on the information provided to the 26th CCPR[10].

24. The Meeting emphasized that the data requirements were different at the national and international levels with an important distinction being that the JMPR is a scientific group and not a regulatory authority. No minimum database requirements had been developed by the JMPR. The JMPR had recognized the need to more fully explain the basis for its recommendations and the increased volume of the evaluations was largely due to more detailed explanations. The Meeting described some typical issues and considerations that it currently takes into account in judging the adequacy of the available information. The Meeting welcomed the request for information on minimum databases from national governments and noted that an explanation of the scientific basis for minimum data requirements would also be of value.

25. As mentioned at the 27th CCPR, the FAO Panel of the 1995 JMPR would be discussing the further development of guidelines on data evaluation. This would initially focus on the guidance already found in Reports of previous JMPR meetings. An index to these items was included in the Report of the 1992 JMPR.

2.6 Experience in the implementation of the CCPR Periodic Review Programme

26. The Meeting reviewed experience in the implementation of the periodic review programme initiated at the 1992 JMPR. The Report of the 1992 JMPR provided general guidance on the data requirements for compounds in the periodic review programme and identified a list of critical supporting studies needed by the FAO Panel. Further guidance on the format of the data submissions and product monographs was issued in 1993.

27. The Meeting highlighted some of the problems encountered with residue data submissions including highly summarized good agricultural practice information and residues data which were inadequate for review. A process whereby incoming data submissions were pre-screened for completeness would help ensure the adequacy of the databases provided to the FAO Panel.

28. The recommendations that compounds only be scheduled for periodic review if accompanied by a product monograph and a complete set of critical supporting studies were noted.

2.7 Revised order of topics in the Residue Evaluation Monographs

29. The order of topics in the evaluations had been modified so that the logical flow of the review was improved. The revised format was included in figure 1 on page 12 of the Report. A manual for the preparation of residue monographs by the FAO Panel had been included as Annex IV to the Report.

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10 ALINORM 95/24, paras 60 - 66

Proposed Statement for JMPR Reports

30. The Observer from GIFAP proposed that the following statement should be included in JMPR reports based on recent discussions within the OECD: "The JMPR reports should only be used to support registration submissions if the reports on which the JMPR publications are based are submitted by the manufacturer owning the data". This policy might require further discussions within the JMPR, in which case GIFAP requested that the statement included in the previous reports be reinstated in publications starting in 1995.

REPORTS ON ACCEPTANCES BY GOVERNMENTS OF CODEX MAXIMUM RESIDUE LIMITS (Agenda Item 6)

SUMMARY OF ACCEPTANCES RECEIVED (Agenda Item 6(a))[11]

31. The Committee noted that since its last session the following countries had notified the Codex Secretariat of their acceptances of Codex MRLs:

Cuba	update (additions and amendments);
Jordan	all existing MRLs (full acceptance);
China	200 MRLs (full acceptance and free distribution); and
Australia	806 MRLs (full acceptance).

The Committee also noted that the Mercado Común del Sur (MERCOSUR) had adopted Codex MRLs through Resolution No. 94/92.

32. The Committee was informed that the Agreement of the Application of Sanitary and Phytosanitary Measures (SPS Agreement)[12] encouraged governments to use Codex standards although governments may use or maintain a higher level of protection when it is scientifically justified and is not unnecessarily restrictive to trade. In cases of trade disputes, Codex standards, as international standards, would be used as references. The Committee was further informed that Codex Acceptance Procedure would be maintained.

REPORTS BY DELEGATES (Agenda Item 6(b))

33. The Observer from EC reported that EC would notify the Codex Secretariat of its updated position on acceptances of Codex standards including MRLs in near future after legal questions were solved. The Brazilian Delegation informed the Committee that Brazil accepted 171 Codex MRLs and submitted the written notification to the Codex Secretariat during the Session.

CONSIDERATION OF INTAKE OF PESTICIDE RESIDUES (Agenda Item 7)

PROGRESS REPORT BY WHO ON PREDICTION OF DIETARY INTAKE OF PESTICIDE RESIDUES (Agenda Item 7(a))

34. The representative of WHO presented CX/PR 95/4 and Conference Room Document (CRD) 5, which provided details of calculations performed by WHO as well as diets used in predicting these intakes. Theoretical Maximum Daily Intake (TMDI) and Estimated Maximum Daily Intake (EMDI) calculations, based on the approach described in the "Guidelines for Predicting Dietary Intake of Pesticide Residues" (WHO, 1989) were carried out on pesticides considered by the 1994 JMPR, except for those pesticides for which no MRLs had been proposed or where all existing MRLs/CXLs had been proposed for withdrawal.

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11 CX/PR 95/3

12 CL 1994/3-GEN

35. The calculations were based on existing CXLs or the most recent pending MRLs in the Codex system. However, it was noted that in previous TMDI calculations for the CCPR and JMPR, a general CXL for a commodity group (e.g., fruits or vegetables), which had been previously proposed for withdrawal by the JMPR, was retained in such calculations until the proposed MRLs for individual commodities had reached Step 8 in the Codex process. The 1994 JMPR, however, requested that, in TMDI calculations performed for the JMPR, such withdrawals be included in TMDI calculations. Consequently, the TMDI calculated for the CCPR may, in certain cases, be slightly higher than that calculated for the JMPR.

36. For the following compounds the TMDI did not exceed the ADI: abamectin, acephate, aldicarb, azocyclotin, bentazone, captan, clethodim, cyhexatin, DDT, dimethoate, ethephon, fentin, folpet, glufosinate-ammonium, glyphosate, hexythiazox, imazalil, iprodione, methamidophos, parathion-methyl, profenofos, propiconazole, tebuconazole and tolclofos-methyl

37. The TMDI exceeded the ADI for the following compounds but, based on information on processing factors, the calculated EMDI did not exceed the ADI: benomyl, carbendazim, ethion, methidathion, phorate, tecnazene and thiophanate methyl.

38. The TMDI exceeded the ADI for the following compounds, but no reduction factors were found to permit the EMDI to be calculated: chlorpyrifos-methyl, diazinon, diquat and heptachlor.

39. Both the TMDI and EMDI exceeded the ADI for the following compounds: chlorfenvinphos, dicofol, disulfoton, phosmet and pirimiphos-methyl.

40. The TMDIs calculated grossly over-estimate the true pesticide residue intakes, but were a useful screening tool as a majority of pesticides considered by this method do not need further safety consideration. When the TMDI exceeds the ADI, EMDI calculations, where information was available, could be used to more perform a slightly more realistic prediction of the pesticide residue intake.

41. The WHO Representative informed the Committee of a joint FAO/WHO consultation which would be held in York, United Kingdom, 2-6 May 1995 to revise the existing Guidelines for Predicting Dietary Intake of Pesticide Residues to improve their accuracy. Issues to be considered included approaches for assessing exposure in the case of acute hazards and sensitive groups, methods to estimate the most likely level of residue on raw commodities at harvest, approaches for using processing and cooking factors, and general considerations for improving estimates of food consumption.

42. The WHO Representative also presented a summary of information on TMDI, EMDI and EDI calculations provided by countries[13]. At the 26th Session, the Committee had decided to implement a procedure to advance proposals where possible. Those MRLs which might give rise to potential intake concern were to be kept for a period of one year at Step 7C to allow governments to provide WHO with documentation of their intake concern, preferably through EDI calculations. The following countries raised concerns for one or more of the MRLs considered at the 26th Session and were requested to provide information to WHO: Austria, Canada, France, Finland, Germany, Netherlands, Norway, Spain, Sweden and United Kingdom, and the EC.

43. The following countries provided general information and TMDI/EMDI-type calculations based on national food consumption data: Finland, Germany, Netherlands, Norway, Spain and Sweden. The Netherlands provided information on a EDI calculation. In addition, a few countries submitted TMDI/EMDI-type calculations for pesticides which were not considered by the 26th CCPR.

44. In a number of cases, governments used assumptions that were different from those currently used by WHO to calculate TMDI/EMDI.

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[13] CRD 7

REPORT ON PESTICIDE RESIDUE INTAKE STUDIES THROUGH THE JOINT UNEP/FAO/WHO FOOD CONTAMINATION MONITORING AND ASSESSMENT PROGRAMME (Agenda Item 7 (b))[14]

45. The WHO Representative reported that the Programme, commonly called GEMS/Food, had informed governments, the CAC and other relevant institutions as well as the public on levels and trends of contaminants in food since 1976. The Programme, which now included participating institutions in 63 countries, had recently come to an end as a formal Joint UNEP/FAO/WHO programme because of restructuring in UNEP. While discussions were underway among UNEP, WHO and FAO on a new project, the WHO Representative assured the Committee that GEMS/Food would continue as a WHO-supported activity in light of the fact that GEMS/Food was the only global health-oriented, population-based food contamination monitoring programme in existence.

46. The WHO Representative reported on several GEMS/Food activities carried out in 1994, including the most recent round of Analytical Quality Assurance studies. With the collaboration of the AOAC, GEMS/Food was offering participating institutions in developing countries copies of the previous edition of the "AOAC Official Methods of Analysis", free on request.

47. In 1994, WHO designated a new WHO Collaborating Centre for Pesticide Analysis and Training at the GTZ Pesticide Service Project, Eschborn, Germany. The Centre will collaborate with GEMS/Food in the provision of training, reference standards and information services for participating institutions.

48. GEMS/Food-EURO continued its activities through a number of technical sub-committees on quality assurance, data management and evaluation of dietary intake.

REPORTS BY MEMBER STATES (Agenda Item 7 (c))

49. Governments provided short summaries of recent studies to assess dietary intake of pesticide residues based on the EDI approach. In several cases, copies of the cited reports were made available to the Committee.

50. In view of the recent concerns at CCPR meetings about the dietary intake of azinphos-methyl, disulfoton, phorate, parathion, oxydemeton-methyl, and dicofol, the Government of Canada initiated a review of Canadian GAP, and also a review of the calculations of dietary residue intakes for these pesticides. These reviews[15] would be presented to the next meeting of *Ad Hoc* Working Group on Acceptances.

51. Canada had also prepared a background paper, "Canada's Position on Acute Dietary Risk Assessment for Potential Pesticides Residues in Food." Canada had used the dietary risk assessment method outlined in this paper in the regulation of aldicarb and amitraz.

52. The Delegation of Belgium reported on a two-year study (1992-1993) of intake of pesticide residues, which indicated that actual exposures to pesticides in food were well below ADIs.

53. The Delegation of Finland informed the Committee of an extensive dietary intake study[16], which reviewed information on the control and intake of pesticide residues in Finland over the period 1981-1993. The study included EDI calculations for 26 pesticides, which indicated that exposures were well below the ADIs.

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14 Report on the Activities of the Joint UNEP/FAO/WHO Food Contamination Monitoring and Assessment Programme

15 "Review of Good Agricultural Practice in Canada"

16 "Control and Intake of Pesticide Residues during 1981-1993 in Finland"

54. The Delegation of Netherlands reported on its ongoing monitoring programme for pesticide residues in primary commodities for the period 1991-1993. The results indicated that levels of pesticide residues in commodities were generally far below their corresponding MRLs.

55. The Delegation of the United States informed the Committee of the availability of a report by the US Food and Drug Administration of the results of its 1993 pesticide residues monitoring programme. However, because of revision of the food consumption database, EDI calculations were not performed for 1993, but would be calculated in future years when the updated consumption data became available.

CONSIDERATION OF RESIDUES OF PESTICIDES IN FOODS AND ANIMAL FEEDS (Agenda Item 8)[17]

56. Recommendations by the 1994 JMPR[18] would be discussed at the 28th Session of the CCPR unless it was necessary to take action prior to the 21st Session of the Commission. Status of MRLs considered is contained in Annex II of this report.

57. The FAO Joint Secretary of the JMPR drew the attention of the meeting to the fact that 10 countries (Australia, Canada, Finland, Germany, The Netherlands, New Zealand, Norway, Peru, Poland and the United Kingdom) had provided data in response to the request made at the 26th CCPR and to the letters circulated in April and August 1994. An agenda of the 1995 JMPR and a tentative agenda and the rationale for review by the FAO Panel of the 1996 JMPR had been circulated to member countries[19]. Countries were requested to provide an inventory of the information they had available to the FAO Joint Secretary of the JMPR by 30 November 1995. The deadline for Submission of information for consideration by the FAO Panel of the 1996 JMPR is 28 February 1996.

MRL Proposals Which Might Give Rise to Intake Concern

58. The Committee decided that the questions raised at the last session related to MRLs which gave rise to TMDI/EMDI calculations exceeding the ADI, should be considered at its next session pending the outcome of a consultation in York (UK). For this reason the Committee decided to keep at Step 7C for another year those draft MRLs which had been held at Step 7C since the last session.

59. Governments, especially those expressing intake concerns, were invited to submit their intake calculations, preferably EDI calculations, to the Chairman of the CCPR and WHO.

Minimum Database Requirements and Establishment of MRLs

60. the Observer from the EC strongly supported the necessity for minimum database requirements for the establishment of Codex MRLs. He maintained that this was necessary to ensure transparency and consistency in the process of establishing MRLs. He cited the 1994 JMPR Report and the Report of the 41st Executive Committee[20] in support of this viewpoint.

61. The Observer from the EC further noted that the GAP likely to give rise to the highest residues or sometimes even the most usual GAP were not always considered in the development of Codex MRLs. This was considered important by the EC from the point of view of risk assessment in order to identify those pesticides for which the TMDI/EMDI exceeded the ADI. The Chairman stated that it was not feasible to take all possible GAPs into account in the development of MRLs at the international level.

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17 CX/PR 95/6 Parts A, B and C, and CX/PR 95/6-Add.1
18 1994 JMPR Report
19 See also CRD 6.
20 ALINORM 95/3

62. The Observer from the EC questioned the terms of reference of the CCPR and JMPR with respect to whether the objective of Codex MRLs is to serve as trading standards or as a basis for risk assessment to protect consumers health. The Secretariat stated that Codex standards are intended to protect the health of consumers while facilitating trade and as such were based on sound science and risk assessment.

63. It was noted that to insist on residue data relevant to all possible GAP would leave the operation of the JMPR open to manipulation. It was stated that the JMPR developed MRLs on the basis of the residue data and GAP information provided for its review.

64. The FAO Joint Secretary noted that in view of the extensive information available from residue monitoring programmes and market basket studies, it was inappropriate to represent MRLs as indicative of the level of exposure to pesticide residues in food at consumption.

65. The Delegation of Australia, supported by Israel, welcomed guidelines which would improve the progress of establishment of Codex MRLs and their wider acceptance. Any such guidelines must be based on scientific data and logic, fully documented and publicly available. The proposed guidelines should also be accompanied by a prospective analysis of the likely effects of their adoption, including adverse or favourable effects or different types of countries.

66. The Delegations of Chile and Sudan supported the work of the JMPR and expressed concern at the statement of the EC towards the needs of countries outside the EC.

Periodic Review Procedure

67. The Committee noted that Section 2 of the CCPR periodic review procedure elaborated and agreed at the 25th Session[21] had caused some confusion as to how to deal with recommendations by the JMPR for pesticides under periodic review. The Committee considered an amendment[22] to Sections 2B and 2C, which was intended to clarify the situation and agreed to consider the amendment prepared by the Delegation of the USA at its next session with the understanding that other elements of the procedure would not be subject to further discussion.

MAXIMUM RESIDUE LIMITS

Azinphos-methyl (002)

68. The Committee noted that following the last session, Germany had provided information on a method of analysis for wheat to the JMPR and that new data on grape would be available for 1995 JMPR evaluation. The US Delegation indicated that the ADI allocated by the JMPR was higher than that in the USA due to different toxicological endpoints used and offered to submit written comments to WHO on cholinesterase inhibition in time for consideration by the 1995 JMPR.

CAPTAN (007)

69. As the 1994 JMPR had received inadequate data on citrus fruits and no data on dried grapes, the Committee agreed to consider deletion of the MRLs for these commodities at its next session.

CHLORMEQUAT (015)

70. The Committee noted that the 1994 JMPR had withdrawn the ADI calling into question the validity of the CXLs. The Observer from GIFAP indicated that the manufacturer was interested in supporting the CXLs and was considering what information needed to be developed. The Committee decided to maintain the existing CXLs and to consider this compound in detail at its next session.

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21 ALINORM 93/24A, Appendix IV, Annex II, page 73.

22 CRD 11.

DIAZINON (022)

71. The Delegations of Germany, Japan, The Netherlands, Spain and Sweden expressed intake concern and were requested to send their calculations to the Chairman and WHO.

Almond hulls

72. The Delegation of USA informed the Committee that the commodity was used in feedstuffs, so residues might be expected in products of animal origin, e.g., cattle meat, milks.

Cabbages, head.

73. The Delegation of France expressed a reservation as it disagreed with the JMPR evaluation.

Garden pea, shelled

74. The Delegation of Germany stated that the database indicated results for pea with pods instead of pea, shelled. The FAO Joint secretary informed the Committee that in the 1993 evaluations only peas were mentioned and that the original reports would need to be revised to confirm the identity of the specific commodity.

Maize forage

75. The Committee noted that animal feeding studies would be reviewed at the 1996 JMPR.

Meat of cattle, pigs and sheep; milks

76. The Delegation of Australia, supported by several delegations, believed that deletion of the CXLs could cause trade problems although it was noted that the residue levels from the monitoring data collected in recent years were low. The Committee decided to retain these CXLs until new data on animal feeding trials were reviewed by the 1996 JMPR. The Committee noted that Australia and the manufacturer had already provided the data.

Pome fruits

77. The Delegation of Germany asked for clarification of whether the residue trials reflected GAP. The Delegation of Chile indicated that an MRL of 2 mg/kg for apple and pear could cause trade problems and that an MRL of 1 mg/kg would be sufficient. Some Delegations stated that they had a reservation with regard to the proposed MRL of 2 mg/kg and supported an MRL of 0.5 mg/kg. The Delegation of France also noted that the evaluations were based on residue data of 7 trials submitted by the USA, with different GAP. The Delegation of USA could not confirm this.

Prunes (dried)

78. The Delegation of Chile stated that an MRL of 2 mg/kg was too high and could cause trade problems.

Spring onions

79. The Delegation of France stated that they had a reservation with regard to GAP because there were only 2 trials with different GAP.

80. The Committee decided to advance the Proposed Draft MRLs for almond hulls; almonds; kale; maize; maize forage; onion, bulb; peppers, sweet; potato; sugar beet; sugar beet leaves or tops; sweet corn; and walnuts to Step 5/8 and the other Proposed Draft MRLs to Step 5. The Committee also

decided to delete Codex MRLs for almond; barley; citrus fruits; cotton seed; hazelnuts; olive oil, virgin; olives; peanut; pecan; rice, polished; safflower seed; sun flower seed; sweet corn; walnuts; and wheat.

DICHLORVOS (025)

Cereal grains; wheat germ

81. The Delegations of Japan and Thailand expressed their intake concerns on cereal grains and were requested to send their calculations to the Chairman and WHO. The Delegation of The Netherlands reserved their position on wheat germ and proposed an MRL identical to cereal grains.

Peanut

82. The Delegation of the USA informed the Committee that the 1993 JMPR periodic review recommended deletion of the MRL in view of a limited database. The Committee decided to consider deletion of the MRL at the next Session.

83. The Committee agreed to advance the Proposed Draft MRLs for meat and milks to Step 5/8 and delete those codex MRLs recommended by the 1993 JMPR for withdrawal.

DICOFOL (026)

84. The Committee decided to return the MRL for cattle meat from Step 5/8 to Step 5 of the normal procedure, as the 1994 JMPR had recommended a change in the MRL.

ENDOSULFAN (032)

85. The EC Observer informed the Committee that they were in the process of re-examining the bases of its existing MRLs and could only support the proposed MRLs for coffee beans, melons, oranges, squashes and soybean (dry).

86. The Delegation of Japan expressed its concern on intake, considering their calculation of the TMDI exceeding the ADI and reserved its position on all endosulfan MRLs.

87. The Committee postponed further discussion and decided to refer the compound for consideration by the Working Group on Priorities for scheduling of a periodic review by the JMPR.

ETHION (034)

88. The Committee noted that the 1994 JMPR recommended withdrawal of all existing CXLs, except for citrus fruits.

ETHOXYQUIN (035)

89. The Committee noted that deletion of all existing CXLs was proposed by the 26th session of the CCPR if no data became available. The USA Delegation opposed deletion and informed the Committee that residue data on pears and a full toxicological data-package would become available for the JMPR in November 1996. The EC Observer expressed concern due to the lack of a carcinogenicity study and offered to send toxicological data to the JMPR. The Committee noted that ethoxyquin was scheduled tentatively for toxicological review and residue evaluation by the 1998 and 1999 JMPR respectively and decided to postpone the withdrawal of CXLs until its 28th session awaiting a detailed overview of the studies in progress.

FENSULFOTHION (038)

90. The Committee decided to delete all existing CXLs since no information had become available.

FENTIN (040)

91. The Committee noted that limited supporting data for pecan CXL had been provided to the 1994 JMPR while no data were provided for peanut. The Committee decided to delete the CXL for peanut. The Committee decided to advance the proposal for hops, dry to Step 8.

FOLPET (041)

92. Several Delegations and the EC Representative indicated that the proposed withdrawals would cause problems because folpet was widely used. The EC Representative informed the Committee that in the EC folpet would soon be evaluated for re-registration.

93. The Delegation of the USA informed the Committee that all US folpet food uses except for avocado were suspended due to lack of adequate data. While revocation of US tolerances had been proposed, the US expressed its willingness to work with trade partners to avoid trade problems.

94. The representative of manufacturer informed the Committee that data on apple; lettuce, head; onion, bulb; potato; and tomato would be ready in 1997 and that data to establish a full ADI had been sent for evaluation by the 1995 JMPR. Data had been requested since 1987 and the Committee decided to delete the CXLs for apple; cherries; citrus fruits; lettuce, head; melons, except watermelon; onion, bulb; and tomato.

Potato

95. The Delegation of The Netherlands stated that their definition of residue was the sum of captan and folpet, in which case 0.1 mg/kg (*) was needed.

Strawberry

96. The EC Representative indicated that as the trials data was limited to outdoor use, they were insufficient.

97. The Committee decided to advance the MRL for grapes to Step 7A awaiting a full ADI allocated to folpet and MRLs to potato and strawberry to Step 5 and to delete the temporary CXLs except those for the above commodities.

METHIDATHION (051)

98. The Committee decided to advance the MRL for grapefruit to Step 5/8 and to delete the existing CXL for shaddocks or pomelos.

MONOCROTOPHOS (054)

99. On behalf of the manufacturer, the Delegation of Switzerland informed the Committee that monocrotophos was no longer used for apple; Brussels sprouts; cabbages, head; carrot; cauliflower; coffee beans; hops, dry; pear; tea, green, black; tomato; and turnip, garden.

100. The Committee decided to recommend deletion of CXLs for these commodities except tea at its 28th Session. The Committee also decided to delete the proposed draft MRL for tea, green, black.

OMETHOATE (055)

101. The Committee noted that the group of omethoate/dimethoate/formothion would be evaluated by the 1996 JMPR as a periodic review. As there was no support for the review of omethoate, residue levels would need to be considered for dimethoate.

PARATHION (058)

102. The FAO Joint secretary of the JMPR informed the Committee that new residue data on MRLs at Step 7B or 7C had been received from Germany and The Netherlands. The Delegation of Germany, on behalf of the manufacturer, indicated that additional studies on apples, the MRL of which was currently at Step 7B, were in progress which would not become available until 1996.

PARATHION-METHYL (059)

103. The Committee agreed to delete the CXLs for cotton seed oil, crude; cotton seed oil, edible; cucumber; melons except watermelon; tea, green, black; and tomato as proposed by the 26th CCPR since no information was made available to the 1994 JMPR.

TRICHLORFON (066)

104. The Committee was informed that trichlorfon was predominantly used in the non-food area and that there was no support for its further use. The Committee agreed to consider withdrawal all CXLs at its next session.

BROMOPROPYLATE (070)

105. The Delegation of the Netherlands expressed a reservation for citrus fruits and grapes because the MRLs were based on inadequate GAP. The Delegation of France expressed a reservation for common beans in view of the evaluation of the data on GAP. The Delegations of Germany and The Netherlands expressed their reservation on cucumber because of the insufficient data. The Delegation of Germany stated that the data for melons supported an MRL of 0.2 mg/kg and questioned the use of data for this commodity for the extrapolation to squash. Notwithstanding these remarks the Committee advanced the proposals for these commodities to Step 5. The other proposals were advanced to Step 5/8. The Committee decided to withdraw the CXLs as indicated by the 1993 JMPR with the exception of the CXL for vegetables, which would be deleted once individual MRLs for vegetables were established.

DISULFOTON (074)

106. The Committee noted that the *Ad Hoc* Working Group on Methods of Analysis would recommend an appropriate limit of determination.

CHLOROTHALONIL (081)

107. The Committee decided to delete the CXL for endive; kale; lettuce, head; peppers; peanut, whole; pumpkins; sweet corn (corn-on-the-cob); and witloof chicory (sprouts) as these commodities would not be supported by the manufacturer. The Committee noted that for the CXLs for the other commodities which were recommended for withdrawal, data would be made available for consideration by the 1997 JMPR. The Observer from the EC was invited to submit to the JMPR trial data and GAP for tomato to support extrapolation and to establish an MRL for peppers.

108. The UK Delegation informed the Committee about the instability of stored samples containing chlorothalonil and the US Delegation questioned the use of rat reproductive studies in the toxicological evaluation of the compound. The UK and US delegations were invited to provide the JMPR with their detailed comments.

109. In response to the request for animal transfer studies, the Observer from GIFAP indicated that studies for barley, straw and fodder, dry would be available in 1997.

110. Several delegations made reservations for celery, while the EC Observer and the Delegation of France questioned the GAP data for peach and potato, respectively and the Delegation of France felt that the MRL for melons was based on the insufficient data.

111. The Committee advanced the MRLs for celery, melons, peach and potato to Step 5, while those for the other commodities at Step 3(a) were advanced to Step 5/8 and that for grapes to Step 8. The Committee recommended the deletion of the CXL for cereal grains as the MRLs for barley and wheat reached Step 5/8. A USA request to WHO for clarification of the rationale for the rat reproductive studies to be addressed at the next JMPR meeting.

DICLORAN (083)

112. The representative of the manufacturer informed the Committee that new residue studies would become available in 1996 on grapes, peach, plums, prunes, potato and tomato. For the latter four commodities, processing studies were being conducted. New toxicological studies would be available in 1997, including rabbit, rat reproduction and chronic mouse studies.

CHLORPYRIFOS-METHYL (090)

113. The Committee was informed that the 1994 JMPR had evaluated data on barley and oats based on the GAP information received and confirmed the previous recommendations. The Committee would consider the MRLs for barley and oats at Step 6 at its next session.

CARBOFURAN (096)

114. As the Committee decided to delete the temporary Draft MRL for carbosulfan for citrus fruits, it also decided to delete the temporary Draft MRL for the same commodity since the residue resulted from the use of carbosulfan. Spain and Brazil expressed their reservations.

EDIFENPHOS (099)

115. The Committee recalled that, at its last session, it was informed that the compound was used only in Japan on rice and that the manufacturer would not support the use of it. The Committee decided to delete all CXLs.

DITHIOCARBAMATES (105)

116. The Committee noted that mancozeb, maneb and propineb were evaluated by the 1993 JMPR under periodic review, while ferbam, ziram and thiram were scheduled for the 1996 JMPR. Several Delegations stated that the entries for dithiocarbamates should indicate the source of each MRL. It was suggested that the footnote 2/(b) be changed to the following: "The MRLs are determined and expressed as mg CS_2/kg and refer to the total residues arising from the use of mancozeb, maneb and propineb". However, the Committee decided to keep the footnote as it was, awaiting a future JMPR evaluation. In view of the lower ADI of propineb, the setting of individual limits was discussed. The Delegation of Germany, on behalf of the manufacturer, indicated that a validated specific method of analysis for propineb was available, but residue trials for propineb would not be available until 1997.

117. The Committee requested the JMPR to analyze the database to indicate the source of each MRL.

118. The Observer from the EC expressed reservations with regard to the Proposed Draft MRLs for banana; barley; carrot; maize fodder; melons, except watermelon; cucumber; currants, black, red, white; edible offal (poultry) papaya; and sugar beet leaves.

119. The Committee decided to maintain the CXLs for celery, cherries and plums (including prunes) and to withdraw the CXLs for common bean (pods and/or immature seeds); peach and strawberry. The Committee decided to advance all Proposed Draft MRLs to Step 5.

ETHIOFENCARB (107)

120. The Committee decided to withdraw all CXLs as there was not support for its periodic review by the JMPR.

ETHYLENE THIOUREA (ETU) (108)

121. The Committee decided to withdraw all Draft MRLs as recommended by the 1993 JMPR.

FENBUTATIN OXIDE (109)

Apple; pear

122. The Committee decided to advance the proposed MRL for pome fruits to Step 5/8 to replace the CXLs for apple and pear.

Banana

123. The Delegations of France and The Netherlands expressed reservations due to the limited database. The Committee decided to advance the Proposed Draft MRL to Step 5.

Cherries

124. The Observer from the EC was of the opinion that an MRL of 5 mg/kg was more appropriate. The Committee decided to advance the Proposed Draft MRL to Step 5.

Citrus fruits

125. The Committee decided to advance individual MRLs for grapefruit and orange noting interventions by the Delegation of South Africa. The Observer from the EC who argued that there had not been sufficient data to establish individual MRLs and supported a group MRLs for citrus fruits. The Committee noted that the data submitted to the 1993 JMPR had been insufficient to establish a group MRL.

PHORATE (112)

Carrot

126. The Committee decided to keep the MRL at step 7C for one year awaiting data on intake estimations, especially in relation to children. The Observer from the EC and the Delegation of the United Kingdom offered to submit calculations to the Chairman and WHO.

ALDICARB (117)

127. The Committee noted the recommendation of the 1994 JMPR to add T to the CXL for potato to specify that it is temporary and that it would be discussed by the 1996 JMPR. The Committee agreed to the recommendation.

2,4,5-T (121)

128. The Committee noted that no additional information had been received and decided to delete all CXLs.

ETRIMFOS (123)

129. The Committee was informed that the manufacturer did not support this compound and decided to consider withdrawal of existing CXLs at its next session awaiting data availability from the manufacturer.

METHACRIFOS (125)

130. The Committee noted that Germany, Poland and the United Kingdom had reported no GAP on cereals and no further information had been provided by other countries. The Committee decided to keep the MRLs for cereal grains, unprocessed wheat bran, wheat flour and wholemeal wheat at step 7C for one more year pending further intake calculations.

PROCYMIDONE (136)

131. The Committee was informed that data were being generated for kiwifruit; peach; peas; plums and Brassica vegetables and would be available for evaluation by the 1998 JMPR. The Committee decided to delete Draft MRLs for apple; currants, black, red, white; egg plant; kiwifruit; melons (except water melon); potato; rice, husked; and rice, polished.

Cherries

132. The Committee decided to advance the proposal to step 8, noting the reservation of the EC which was of the opinion that the database was insufficient.

Nectarine; peach

133. The Committee decided to keep the MRLs at step 6 and to consider deletion next year if no further information was received.

Tomato

134. The Committee decided to advance the MRL to step 8, noting a reservation of France who requested additional information on processed products.

TRIAZOFOS (143)

Carrots

135. The Observer from EC expressed concern about the Draft MRL because the calculated TMDI and EMDI exceeded the ADI. The UK Delegation and the EC representative agreed to provide additional intake calculations and other relevant data to the Chairman of the CCPR and WHO. The Committee decided to hold the MRL at Step 7C.

Citrus fruits

136. The Committee decided to delete the temporary Draft MRL for citrus fruits as the required data had not become available.

CARBOSULFAN (145)

Citrus fruits

137. The Observer from GIFAP informed the Committee that a full data package would be sent to the 1996 JMPR and requested retention of the Draft MRL, which was supported by the Delegations of

Spain and Brazil. As the it was still Draft MRL and had been temporary since 1984 and the data required by the 1991 JMPR had not been provided, the Committee decided to delete it.

FLUCYTHRINATE (152)

Cattle meat; cattle milk; goat meat

138. The Committee decided to delete the temporary MRLs for cattle meat, cattle milk and goat meat as recommended by the 1993 JMPR, noting concerns expressed by the Delegation of The Netherlands about the often inadequate data for animal products and resulting lack of guidance on possibly occurring residues.

Maize fodder; maize forage

139. The Committee decided to delete the MRLs for maize fodder and maize forage as these had been at Step 7B since 1988 and there appeared to be no support for them.

Maize

140. The Committee was informed by the US Delegation that for maize there was no registered use in the US and decided to consider deletion of the CXL at the next session.

PYRAZOPHOS (153)

Apple; hops, dry

141. The Committee decided to advance the proposals to step 5, noting the reservations by the Delegation of France that data were considered insufficient.

Melons; strawberry

142. The Committee decided to advance the proposals to step 5, noting the reservations by the Delegation of the Netherlands concerning whether GAP was reflected by the limited database.

143. All other proposals were advanced to step 8.

BENALAXYL (155)

144. The Committee decided to advance the proposal for potato to step 5/8 and to delete the existing CXL for potato.

CYFLUTHRIN (157)

145. The Committee decided to advance the proposal for tomato to step 8.

GLYPHOSATE (158)

146. The Committee noted that the MRL for wheat bran, unprocessed at 40 mg/kg was not adopted by the 20th Session of the CAC. The 26th CCPR decided to set an MRL of 20 mg/kg. The 1994 JMPR confirmed this MRL. The revised MRL had been advanced to Step 8 at the last session.

VINCLOZOLIN (159)

147. The Committee decided to delete the MRL for apricot as sufficient GAP data on post-harvest treatment were not available.

FLUSILAZOLE (165)

Nectarine; peach

148. The Committee decided to advance this proposal to step 8, noting the reservation of The Netherlands, which was of the opinion that the proposed figures were too high and that more trial data were needed.

OXYDEMETON-METHYL (166)

149. The Delegation of Germany, on behalf of the manufacturer, informed the Committee that a new strategy would allow it to support the use for apple; barley; beans; broccoli; Savoy and head cabbage; cauliflower; grapefruit; grapes; kale; kohlrabi; lemon; lettuce, leaf; mandarin; orange, sweet, sour; pear; peas; plums; potato; strawberry; sugar beet; tree nuts, wheat. The manufacturer did not support other commodities for which Draft MRLs had been proposed. A full database was expected in 1997. The Observer from GIFAP informed the Committee that the US registrant would continue to support the MRLs for alfalfa fodder; Brussels sprouts; clover hay or fodder; egg plant; peppers; watermelon and summer and winter squash. The Committee decided not to discuss the individual MRLs and to postpone the consideration of this compound until new data were submitted and reviewed by the JMPR.

HEXACONAZOLE (170)

150. The Committee decided to advance the Draft MRLs for wheat and wheat straw and fodder, dry to Step 8.

PROFENOFOS (171)

Cabbages, head

151. The Delegation of Germany, supported by The Netherlands, expressed their reservation because GAP are reported for Asian and South American countries and the limits were based on trials from countries for which no GAP were reported. The Committee decided to postpone further consideration until the 28th CCPR.

Cotton seed; cotton seed oil, edible

152. The Delegation of Germany expressed reservation because the MRL was based on an exaggerated application rate. The FAO Joint Secretary indicated that there might be some misinterpretation of data and that this issue would be reviewed by the 1995 JMPR meeting. The Committee decided to postpone further consideration until the 28th CCPR.

Meat

153. The Delegation of The Netherlands stated that the 1990 JMPR proposed a LOD of 0.05 mg/kg. The FAO Joint Secretary agreed to determine the correct LOD.

154. The Committee decided to keep the Draft MRLs for cotton seed; cotton seed oil, edible; and meat at Step 7B.

Tomato

155. The Delegation of The Netherlands, supported by the Delegations of Chile and Germany, asked for clarification of GAP especially PHI on which the proposed MRL was based. The Delegation of Chile preferred an MRL of 0.5 mg/kg to avoid possible trade problems.

156. The Committee decided to advance the Draft MRLs for eggs; milks; potato; soya bean (dry); soya bean oil, refined; sugar beet; and tomato to Step 8.

BENTAZONE (172)

157. The Delegation of Germany, supported by the Delegation of France, drew attention to the residue definition for animal products. They preferred a definition without the metabolite, as in practice no residues of the metabolite had been found. These Delegations were also of the opinion that the LOD was too low. Governments were invited to send information on their residue definitions for animal products to the JMPR.

158. The Committee decided to keep the Draft MRLs for animal products at Step 7B and to advance the Draft MRLs for garden pea (young pods); lime bean (young pods/immature beans); linseed; onion, bulb; peanut; and soya bean (dry) to Step 8.

HEXYTHIAZOX (176)

159. The Committee noted the 1994 JMPR review and would consider all Draft MRLs at Step 6 at the next session.

BIFENTHRIN (178)

160. The Committee noted that it had decided at its last session to advance the MRLs for barley, wheat and maizeto Step 5/8. Since additional information to support a post-harvest use on cereals would be reviewed by the 1995 JMPR, the Committee decided to return the MRLs at step 5 of the normal procedure.

CYCLOXYDIM (179)

Beans (dry)

161. Some delegations were of the opinion that the database was insufficient or was unclear as to what had been investigated. The Committee was also informed that the JMPR had difficulties in reviewing the data. The Committee decided to advance the Proposed Draft MRL to step 5, noting reservation from the Delegations of France, Germany and the Netherlands regarding the database.

Grapes

162. The Committee decided to advance the MRL to step 5, noting reservations from The Netherlands and France regarding an inadequate database.

Lettuce, head and leaf

163. The Committee decided to advance the MRLs to step 5, noting the reservation of The Netherlands regarding the limited database.

Potato

164. The Committee decided to advance the MRL to step 5, noting the reservation of France indicating that no data are available on potato processing.

Soya bean (dry)

165. The Committee decided to advance the MRL to step 5, noting a reservation of France indicating that the database was not sufficient with regard to the transfer into the oil.

Strawberry

166. The Committee decided to advance the MRL to step 5, noting a reservation of The Netherlands who indicated that the database was too limited.

Other commodities

167. The Committee decided to advance the MRLs for the other commodities to step 8.

DITHIANON (180)

168. The Committee noted that it had decided at its last session advance the MRL for cherries to Step 5/8. Since additional data had been received, this MRL would be reviewed by 1995 JMPR. The Committee therefore decided to keep the MRL at step 5 of the normal procedure.

PENCONAZOLE (182)

169. The Committee noted that data to support grapes and pome fruits MRLs would be made available to the 1995 JMPR.

ETHOFENPROX (184)

170. The Committee decided to advance the MRL for pome fruits to step 5, noting reservations of France and The Netherlands, regarding the limited information submitted. The Committee decided to advance the MRL for potato to step 5/8.

FENPROPATHRIN (185)

Cattle meat

171. The Delegation of The Netherlands, supported by the Delegation of France and the Observer from the EC, stated that more realistic dose levels be used for animal trials and proposed separate MRLs for cattle meat of 0.05 mg/kg and for cattle fat 0.5 mg/kg. Notwithstanding the above, the Committee decided to advance the MRLs to step 5.

Egg plant

172. The Committee decided to advance the MRL to step 5 noting a reservation by France which considered the data insufficient.

Eggs

173. The Committee decided to advance the MRL to step 5/8, noting a reservation of The Netherlands that the limit of determination was too low.

Grapes

174. The Committee decided to advance the MRL to step 5 noting a reservation of France who indicated that the database is too limited.

EXTRANEOUS MAXIMUM RESIDUE LIMITS[23]

175. The Chairman reminded the Committee of CL 1994/12 part B3 regarding the use of monitoring data for EMRL setting. Information on national EMRL setting was received from New Zealand, the

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[23] CX/PR 95/6 Part A.2

USA and the EC. Norway offered to send the JMPR monitoring data and Sweden and the EC were requested once again to submit their data. The Committee had a general discussion on this issue. Several delegations were in favour of developing a more transparent policy towards the establishment of EMRLs for extraneous substances. The Committee agreed with the view that an EMRL should not be automatically set at the highest level found and noted that other criteria should be and often were used as well.

176. The Delegation of The Netherlands pointed out that the CCFAC was elaborating a general approach to contaminants. It could be useful to establish some form of cooperation on this issue between the two Committees. The delegation also drew the attention of the Committee to the principle that the levels of contaminants should be as low as reasonably achievable. The Delegation of the USA, although in principle agreeing with this view, cautioned against a great expansion of effort, since only a few substances were involved. The Committee agreed with the Observer from the EC that monitoring data should be representative of a geographical region and noted that data were routinely requested from all geographical regions. The Committee requested the Delegations of Australia, New Zealand, The Netherlands and other countries to send details of their basic policies on the establishment of EMRLs to the JMPR. The Committee agreed that it should continue to collect monitoring data and noted the willingness of the GEMS programme to provide the relevant data in this field.

DDT (021)

177. Monitoring data had been received from Australia, New Zealand and the USA. The Committee decided to keep the Proposed Draft EMRLs for meat at Step 3 pending evaluation by the 1996 JMPR. The Committee decided to advance the Proposed Draft EMRLs for carrot, eggs and milk to Step 5.

HEPTACHLOR (043)

178. The Committee decided to delete the CXLs for carrots, sugar beet, tomato and vegetables, (except...) as recommended by the 1993 JMPR.

EXPRESSION AND APPLICATION OF MRLS FOR FAT SOLUBLE PESTICIDES IN MEAT, ANIMAL FAT AND EDIBLE OFFAL (Agenda Item 9)

179. The Delegation of the Netherlands introduced CX/PR 95/7 and 95/7-Add.2 which contained graphic presentations of the residue distribution in relation to fat content in various animal products for clarification of the proposed regulatory solutions. The Committee noted that the original proposals[24] were slightly revised, as contained in CX/PR 95/7, taking into consideration comments made by governments[25] and the 1994 JMPR[26]. The Delegation emphasized that the proposals were a tool for general regulatory guidance for the application of MRLs for primary products to secondary and derived products and provided a method to deal with partially fat soluble residues. The Delegation also stressed that decisions on their application would have to be taken case by case, on a sound scientific basis, following an evaluation of data by the JMPR.

180. Several delegations raised questions which included: whether there had been problems in trade related to the expression of MRLs for fat soluble pesticides; and the need for fat determination leading to possible increases in inspection costs. It was clear that the Committee could not reach general consensus. However, the Committee agreed to delete a suffix F from MRLs for milk set at or around the limit of determination as it was not appropriate to use the F for deciding relevant MRLs for milk products.

181. The Committee also agreed to seek government comment on the following recommendation for consideration at its next session, as it was felt that confusion had arisen from the current expression of meat MRLs:

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24 ALINORM 95/24, Appendix II
25 CX/PR 95/7-Add.1
26 Section 3.1 of the 1994 JMPR Report

"At present, MRLs for fat soluble pesticides in meat are expressed as MM [code number] meat [MRL] (fat) to specify that the MRLs apply to the fat of the meat. As these MRLs have been derived from data on residues in the animal fat as a whole product, it is recommended to change the commodity description from meat to animal fat and to delete (fat), i.e., the expression of MRLs for fat soluble pesticides in meat will be:

MF [code number] [animal] fat [MRL]."

182. The Committee decided to discontinue this work except for the above recommendation with the understanding that it would resume this work in the future if necessary. The Committee thanked the author of the documents for his effort over several years on this difficult matter.

CONSIDERATION OF CHEMICALS USED BOTH AS PESTICIDES AND VETERINARY DRUGS (Agenda Item 10)

183. At its 26th Session the Committee had agreed that the discussion paper prepared by Australia concerning the above subject be appended to its report for circulation and government comment[27]. As timely government comments had not been received in response to CL 1994/12-PR, a working paper had not been prepared for the current session.

184. The Delegation of Australia noted that since the development of the original discussion paper, they had been of the opinion that 1) Codex definitions clearly differentiated between pesticide and veterinary drug; 2) the general scientific principles used by both bodies in the establishment of MRLs were generally consistent; and, 3) the potential duplication of efforts in the establishment of MRLs for compounds used as both pesticides and veterinary drugs was minimal.

185. As the Committee could not identify any significant problems concerning this issue, it was reconfirmed that the coordination of efforts to avoid duplication between the respective bodies continue to be addressed by the JECFA/JMPR and Codex Secretariats, where necessary.

CONSIDERATION OF THE REPORT OF THE *AD HOC* WORKING GROUP ON ACCEPTANCES (Agenda Item 11)

186. The report of the *Ad Hoc* Working Group[28] was presented to the Committee by its Chairman Mr J. R. Mascall (UK).

187. The attention of the Committee was drawn to the first subject discussed by the Group, a proposed CCPR procedure for proposed MRLs whose TMDI/EMDI calculations exceed the ADI[29]. This agenda item was returned to the Working Group for further discussion following the 26th Session, and the revised proposal procedure was now presented to the Committee for consideration. The Committee also noted the second item of discussion which was information on current activities related to risk assessment following acute dietary exposure to pesticide residues.

188. Discussion also took place on documents related to the first item supplied and presented to the Group, by the FAO and WHO Secretaries of the JMPR. They recommended discussion of a number of alternative approaches and additional points for consideration when TMDI/EMDI estimates exceeded the ADI.

189. The Committee discussed the proposed CCPR procedure for proposed MRLs whose TMDI/EMDI calculations may exceed the ADI. No consensus was reached on the document as currently worded so it was agreed that the Committee would send out a revised draft inviting comments

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27 paras. 340-345 and Appendix III, ALINORM 95/24

28 CRD 1

29 Annex 1 of CRD 1

prior to further discussion by the Committee at the next session. The Delegation of Germany was of the opinion that the document be referred to the Commission for their consideration. She stressed that since this document contained elements of general and political nature, the Commission should be fully informed of its content and aims and have the opportunity to react to it.

190. It was also agreed that both the proposed procedure and the FAO/WHO comments be supplied to the FAO/WHO Consultation in York (UK) for information, together with the paper related to risk assessment following acute dietary exposure.

191. Having noted the view expressed by the Group that a database of procedures for estimating dietary intakes would be valuable to the CCPR as a reference document, the Committee invited Member Countries to provide information to the Chairman of CCPR on their national procedures for estimating the dietary intake of pesticide residues, indicating any divergence from the existing UNEP/FAO/WHO Guidelines.

192. The Committee decided to set up a new *Ad Hoc* Group which would function until the end of the next session under the present Chairman to continue the above discussions.

RECOMMENDATIONS FOR METHODS OF RESIDUE ANALYSIS AND SAMPLING (Agenda Item 12)

SAMPLING FOR THE DETERMINATION OF PESTICIDE RESIDUES IN MILK, MILK PRODUCTS AND EGGS FOR CONTROL PURPOSES (Agenda Item 12(a))

193. The Delegation of the United Kingdom presented the Draft Recommended Method of Sampling for the Determination of Pesticide Residues in Milk, Milk Products and Eggs[30]. Changes were proposed to remove inconsistencies within the Recommended Methods of Sampling elaborated by the CCPR. The Committee considered the Draft at Step 7 and agreed to the following amendments:

- Section 2.1 Replace the word "determined" with "ascertained";
- Section 4 "The final sample is considered representative of the lot when the outlined procedure has been followed. The Codex MRL applies to the final sample."; and
- Section 6.8 Insert the word "opaque" after the word "clean" in the first sentence.

194. The Committee agreed to advance the Draft Recommended Method, as contained in Appendix II of this report, to Step 8 for adoption by the Commission.

CONSIDERATION OF THE REPORT OF THE *AD HOC* WORKING GROUP ON METHODS OF ANALYSIS (Agenda Item 12(b))

195. The report of the Working Group[31] was presented by the Chairman of the Group, Mr. van Zoonen (The Netherlands). The Committee noted that the Working Group discussed the revision of the list of methods of analysis, limits of determination, methods of sampling and information on accreditation programmes.

List of Methods of Analysis

196. The Committee accepted the revised list as presented[32] with an amendment to section 1.2(i) as proposed by GIFAP to clarify the responsibilities of GIFAP. The list is attached to this report as Appendix III for endorsement by the Commission.

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30 CX/PR 95/9
31 CRD 2
32 Annex 1 of CRD 2

Limit of Determination (LOD)

197. The Working Group proposed that future MRLs set at or about the LOD should be set at levels that could be achieved routinely, and with an acceptable level of confidence, in any normally equipped regulatory laboratory. The Committee noted the distinction between LODs for routine monitoring for regulatory purposes using multi-residue methods and analyses by specific methods for registration purposes. Some delegations expressed the view that for a pesticide with a very low ADI, the LOD should be set as low as possible. Concerning the difficulties when the residue definition included various compounds, the Working Group proposed that the LOD could refer to that achieved for the most significant component(s). It was pointed out that although the proposal was in principle acceptable, it would be difficult for the JMPR to implement because information was not always available to the JMPR on behaviour and routine of multi-residue methods.

198. The UK Delegation suggested that manufacturers be urged to provide information on the conservative LODs suitable for regulatory monitoring using multi-residue analysis in addition to that provided for registration using specific methods of analysis. The Committee accepted the proposal.

Methods of Sampling

199. The Working Group had noted inconsistencies in definitions and terminology between the Recommended Methods of Sampling for Determination of Pesticide Residues and methods of sampling elaborated by other Codex Committees and international organizations and recommended that the existing Recommended Methods of Sampling be revised. The Working Group expressed its willingness to prepare a revised draft for consideration at a future session of the CCPR.

200. The Committee decided to seek approval of the Commission to initiate the revision of the existing method of sampling.

201. The Committee thanked the Working Group for its effort and decided to set up a new *Ad Hoc* Working Group under the chairmanship of Mr. van Zoonen (The Netherlands).

IDENTIFICATION OF PROBLEMS RELATIVE TO PESTICIDE RESIDUES IN FOOD IN DEVELOPING COUNTRIES (Agenda Item 13)

202. Dr. R. Gonzalez (Chile), Chairman of the *Ad Hoc* Working Group on Pesticide Residue Problems in Developing Countries, presented the report of the Working Group Meeting[33]. The Working Group focused its discussions on the "Revised Questionnaire for Information on Pesticides in Current Use in Developing Countries"[34].

203. The Committee was informed that the questionnaire was re-drafted by Egypt and Cuba in order to collect and assess information from developing countries concerning their main agricultural exports, the most commonly used pesticides on these commodities and any apparent trade difficulties associated with product rejections in those cases where Codex or National MRLs were exceeded or when pesticides lacking tolerances in importing countries were detected.

204. The Committee agreed with the recommendations of the Working Group as follows:

- The Questionnaire would be circulated for suggestions for improvements, including clarity and accuracy of the French translation;
- At the 28th Session, the Committee would consider a revised questionnaire;

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33 CRD 3
34 CX/PR 95/10

- Duplicative efforts with other Codex bodies working in related fields would be avoided (e.g., work of the Codex Committee on Food Import and Export Inspection and Certification Systems related to rejections) but the outcome be forwarded to the Committee for information;

- Liaison with other Coordinating Committees would be maintained with a view to collecting additional information on a regional basis; and

- WHO undertook to compile information on pesticide residue problems from various sources, including national governments, and to prepare a summary report for the 28th Session.

205. The Committee agreed that the *Ad Hoc* Working Group may need to be re-established on an informal basis at its next session if necessary. The Committee thanked the Working Group, including its Chairman and Rapporteur (Dr. J. Jones of the USA) for its excellent work.

ESTABLISHMENT OF PRIORITY LISTS OF PESTICIDES (Agenda Item 14)

206. The Report of the *Ad Hoc* Working Group on Priorities[35] and the future JMPR Review Schedule[36] were presented by the acting Chairman, Dr. R. Eichner (Australia).

207. The Committee noted that one proposal for the review of a new compound (Pyrifenox) was received and the compound was scheduled for evaluation in 1999. The priorities identified by the Working Group and scheduled for JMPR evaluation and candidate compounds for periodic review not yet scheduled[37] are attached to this report as Appendix IV.

208. The Committee agreed with the Working Group recommendation that the Selection Criteria for the Prioritization and Scheduling of Compounds for JMPR Review would be further discussed at its next session. The Committee noted that a List of Industry Contacts would also be made available to the 28th CCPR to assist Member Countries in facilitating the acquisition of evaluation data.

209. The Committee agreed that the *Ad Hoc* Working Group would meet on an informal basis at its next session under the Chairmanship of Mrs. J. Taylor.

OTHER BUSINESS AND FUTURE WORK (Agenda Item 15)

210. The Brazilian Delegation stressed the importance of effort by governments to reduce use of pesticides through GAPs and alternative methods of pest and disease control. The importance of establishing MRLs in transparent manner was also stressed.

211. As discussed under agenda items 9[38] and 12[39], respectively, the Committee decided to discontinue the consideration of the Expression and Application of MRLs for Fat Soluble Pesticides in Meat, Animal Fat and Edible Offal except for the recommendation to change the expression of MRLs in meat; and, to initiate the revision of the Recommended Methods of Sampling for the Determination of Pesticide Residues.

212. The Committee agreed to its Summary Status of Work[40] for forwarding to the Executive Committee for approval.

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35 CRD 4
36 CRD 6 Add. 1
37 Annex 1 of CRD 4
38 para. 182
39 para. 200
40 Annex I of this report

DATE AND PLACE OF NEXT SESSION (Agenda Item 16)

213. Notwithstanding the opinions of the Delegations of Australia, Germany and the United Kingdom that a shortened Committee meeting could have serious implications for future CCPR deliberations, the Committee noted that the 28th Session of the Codex Committee on Pesticide Residues was tentatively scheduled to be held in The Hague from 15-20 April 1996, subject to approval by the 21st Session of the Codex Alimentarius Commission. It was suggested that government concerns regarding the shortened meeting be raised directly at the Commission meeting.

SUMMARY STATUS OF WORK

Subject	Step	For Action By:	Document Reference
Draft MRLs	8	21st CAC	ALINORM 95/24A-Add.1
Method of sampling for the determination of pesticide residues in milk, milk products and eggs	8	21st CAC	ALINORM 95/24A, Appendix II
Proposed Draft MRLs and EMRLs	5	21st CAC	ALINORM 95/24A-Add.1
Draft MRLs kept at Step 7	7	Governments JMPR CCPR	ALINORM 95/24A
Draft MRLs	6	Governments Secretariat 28th CCPR	CX/PR 95/6 Part A
Proposed Draft MRLs and EMRLs	3	Governments Secretariat 28th CCPR	CX/PR 95/6 Part A
Consideration of the 1995 proposals for the Priority Lists	1	21st CAC Governments	ALINORM 95/24A, Appendix IV
Revision of the Recommended Methods of Sampling for the Determination of Pesticide Residues	1	21st CAC 28th CCPR	ALINORM 95/24A, para. 200
Methods of Analysis	-	21st CAC Governments	ALINORM 95/24A, Appendix II
Expression of MRLs for fat-soluble pesticides in meat	-	Secretariat Governments 28th CCPR	ALINORM 95/24A, para. 181
Identification of pesticides and pesticide/commodity combinations of interest to developing countries	-	Secretariat Governments 28th CCPR	ALINORM 95/24A, paras. 204
Periodic review procedure - Sections 2B and 2C	-	Governments USA 28th CCPR	ALINORM 95/24A, para. 67

STATUS OF MRLS AND EMRLS CONSIDERED BY THE 27TH SESSION OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES

1. *MRLs*

Pesticide		Status of MRLs	
Code	Name		
022	DIAZINON	Step 5:	blackberries; boysenberry; broccoli; cabbages, head; cantaloupe; carrot; cherries; Chinese cabbage, type "Petsai"; common bean (pods and/or immature seeds); cucumber; currants, black, red, white; garden pea, shelled; kiwifruit; kohlrabi; lettuce, head; lettuce, leaf; peach; pineapple; plums (including prunes); pome fruits; prunes; radish; raspberries, red, black; spinach; spring onion; squash, summer; strawberry; tomato
		Step 5/8:	almond hulls; almonds, kale; maize; maize forage; onion, bulb; peppers, sweet; potato; sugar beet; sugar beet leaves or tops; sweet corn (corn-on-the-cob); walnuts
		Deletion:	CXLs for almonds; barley; citrus fruits; cotton seed; hazelnuts; olive oil, virgin; olives; peanut; pecan; rice, polished; safflower seed; sunflower seed; sweet corn (corn-on-the-cob); walnuts; wheat
025	DICHLORVOS	Step 5:	cereal grains; wheat bran, unprocessed; wheat flour; wheat germ; wheat wholemeal
		Step 5/8:	meat; milks
		Deletion:	CXLs for cacao beans; coffee beans; eggs; fruits; goat meat; lentil (dry); lettuce, head; meat of cattle, pigs and sheep; milks; soya bean (dry); vegetables (except..)
026	DICOFOL	Step 5:	cattle meat
038	FENSULFOTHION	deletion:	all CXLs
040	FENTIN	Step 8:	hops, dry
		Deletion:	CXL for peanut

Pesticide		Status of MRLs	
Code	Name		
041	FOLPET	Step 5:	potato; strawberry
		Step 7A:	grapes
		Deletion:	CXLs for apple; cherries; citrus fruits; lettuce, head; melons, except watermelon; onion, bulb; tomato
051	METHIDATHION	Step 5/8:	grapefruit
		Deletion:	CXL for shaddocks or pomelos
054	MONOCROTOPHOS	Deletion:	Proposed Draft MRL for tea, green, black
059	PARATHION-METHYL	Deletion:	CXLs for cotton seed oil, crude; cotton seed oil, edible; cucumber; melons, except watermelon; tea, green, black; tomato
070	BROMOPROPYLATE	Step 5:	citrus fruits; common beans (pods and/or immature seeds); cucumber; grapes; melons, except watermelon; squash, summer
		Step 5/8:	plums (including prunes); pome fruits; strawberry
		Deletion:	CXLs for apple; banana; cherries; cotton seed; hops, dry; nectarine; peach; pear; plums (including prunes); strawberry; tea, green, black
081	CHLOROTHALONIL	Step 5:	celery; melon, except watermelon; peach; potato
		Step 5/8:	barley; barley straw and fodder, dry; cabbages, head; cauliflower; cherries; onion, bulb; peanut; sugar beet; sugar beet leaves or tops; wheat; wheat straw and fodder, dry
		Step 8:	grapes
		Deletion:	CXLs for cabbages, head; cauliflower; cherries; cereal grains; endive; kale; lettuce, head; onion, bulb; peanut, whole; peppers; pumpkins; sugar beet; sweet corn (corn-on-the-cob); witloof chicory (sprouts)
096	CARBOFURAN	Deletion:	Draft MRL for citrus fruits
099	EDIFENPHOS	Deletion:	all CXLs

Pesticide		Status of MRLs	
Code	Name		
105	DITHIOCARBAMATES	Step 5:	all Proposed Draft MRLs
		Deletion:	CXLs for common bean (pods and/or immature seeds); peach; strawberry
107	ETHIOFENCARB	Deletion:	all CXLs
108	ETHYLENETHIOUREA	Deletion:	all Draft MRLs
109	FENBUTATIN OXIDE	Step 5:	banana; cherries; edible offal (mammalian); grapefruit; mandarin; orange, sweet; prunes; raisins; walnuts
		Step 5/8:	almonds; apple pomace, dry; chicken meat; chicken, edible offal of; citrus pulp, dry; cucumber; eggs; grape pomace, dry; meat; milks; pecan; pome fruits; strawberry
		Deletion:	CXLs for apple; apple pomace, dry; citrus pulp, dry; cucumber; egg plant; gherkin; meat of cattle, goats, horses, pigs, sheep; melons, except watermelon; milks; pear; peppers, sweet; strawberry
112	PHORATE	Step 7C:	carrot
121	2,4,5-T	Deletion:	all CXLs
136	PROCYMIDONE	Step 5/8:	sunflower seed oil, edible
		Step 6:	nectarine; peach
		Step 8:	cherries; common bean; cucumber; gherkin; grapes; lettuce, head; onion bulb; peppers; raspberries, red, black; strawberry, sunflower seed; tomato
		Deletion:	Draft MRLs for apple; currants, black, red, white; egg plant; kiwifruit; melons, except water melons; potato; rice, husked; rice, polished
143	TRIAZOFOS	Step 5/8:	soya bean (dry); strawberry
		Step 7C:	carrot
		Step 8:	Brussels sprouts; cabbages, head; cereal grains; onion, bulb; potato; sugar beet
		Deletion:	Draft MRLs for banana; citrus fruits

Pesticide		Status of MRLs	
Code	Name		
145	CARBOSULFAN	Deletion:	Draft MRL for citrus fruits
152	FLUCYTHRINATE	Deletion:	Draft MRLs for cattle meat; cattle milk; goat meat; maize fodder; maize forage
153	PYRAZOPHOS	Step 5:	apple; hops, dry; melons, except watermelon; strawberry
		Step 5/8:	barley; barley straw and fodder, dry; Brussels sprouts; carrot; cucumber; wheat; wheat straw and fodder, dry
155	BENALAXYL	Step 5/8:	potato
		Deletion:	CXL for potato
157	CYFLUTHRIN	Step 8:	tomato
159	VINCLOZOLIN	Deletion:	Draft MRL of apricot
165	FLUSILAZOLE	Step 5:	apricot
		Step 8:	nectarine and peach
170	HEXACONAZOLE	Step 8:	wheat; wheat straw and fodder
171	PROFENOFOS	Step 7B:	cotton seed; cotton seed oil, edible; meat
		Step 8:	eggs; milks; potato; soya bean (dry); soya bean oil, refined; sugar beet; tomato.
172	BENTAZONE	Step 7B:	eggs; meat; milks.
		Step 8:	garden pea (young pods); lima bean (young pods/immature beans); linseed; onion, bulb; peanut; soya bean (dry)
178	BIFENTHRIN	Step 5:	barley; maize; wheat
179	CYCLOXYDIM	Step 5:	beans (dry); grapes; lettuce, head; lettuce leaf; peas; peas, shelled; potato; soya bean (dry); strawberry
		Step 5/8:	Brassica vegetables; carrot; common bean (pods and/or immature seeds); leek; rape seed; sugar beet; sugar beet leaves or tops

Pesticide		Status of MRLs	
Code	Name		
180	DITHIANON	Step 5:	cherries
184	ETOFENPROX	Step 5:	pome fruits
		Step 5/8:	potato
185	FENPROPATHRIN	Step 5:	cattle meat; cattle milk; egg plant and grapes
		Step 5/8:	cattle, edible offal of; cotton seed; cotton seed oil crude; eggs; gherkin; peppers, sweet; pome fruits; poultry meat; poultry, edible offal of; and tomato

2. *EMRLs*

Pesticide		Status of MRLs	
Code	Name		
021	DDT	Step 3:	meat
		Step 5:	carrot; eggs; milks
043	HEPTACHLOR	Deletion	CXLs for carrot; sugar beet; tomato; vegetables (except ...)

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DRAFT RECOMMENDED METHOD OF SAMPLING FOR THE DETERMINATION OF PESTICIDE RESIDUES IN MILK, MILK PRODUCTS AND EGGS

(Advanced to Step 8 of the Codex Procedure)

1. Objective

To provide instructions for sampling a lot of milk, milk products or eggs to determine compliance with Codex maximum residue limits.

2. Definitions

2.1 Lot

An identifiable quantity of food delivered at one time and ascertained by the sampling official to have common characteristics, such as origin, variety, type of packing, packer, consignor and markings. A consignment may consist of one or more lots.

2.2 Consignment

A quantity of material covered by a particular consignment note or shipping document. Lots in a consignment may have different origins or be delivered at different times.

2.3 Primary Sample

A quantity of material taken from a single place in the lot. A primary sample may consist of one or more units.

2.4 Bulk Sample

The combined total of all the primary samples taken from the lot.

2.5 Final Sample

The bulk sample or a representative portion of the bulk sample to be used for control purposes.

2.6 Laboratory Sample

The sample intended for the laboratory. The final sample may be used as a whole or subdivided into representative portions (separate laboratory samples) if required by national legislation.

3. Commodities to which the recommended method applies

3.1 Selected Class B: Primary food commodities of animal origin

Type 06 - Mammalian products
No. 033 Milks

Type 07 - Poultry products
No. 039 Eggs of poultry

3.2 Selected Class E: Processed products of animal origin made only from primary food Nos. 033 and 039

Type 16 - Secondary food commodities of animal origin
No. 082 Secondary Milk Products

Type 17 - Derived edible products of animal origin
No. 087 Derived Milk Products

Type 18 - Manufactured (single ingredient) products of a minimum of 1 kilogram container or unit size
No. 090 Manufactured milk products

Type 19 - Manufactured (multiple ingredient) products of a minimum of 1 kilogram container or unit size
No. 092 Manufactured milk products

4. Principle adopted

The final sample is considered representative of the lot when the outlined procedure has been followed. The Codex MRL applies to the final sample.

5. Sampling Officials

Samples must be taken by officials authorised for the purpose.

6. Sampling Procedure

6.1 Material to be sampled

Each lot must be sampled separately.

6.2 Precautions to be taken

During collection and processing, contamination or other changes in the samples must be prevented which could alter the residue, affect the analytical determination, or make the laboratory sample less representative of the bulk or final sample.

6.3 Collection of primary samples

Detailed instructions for the collection of primary samples of various products are provided in Table 2, together with the minimum quantity required for the laboratory sample(s). The following are general instructions.

(a) Where practicable, each primary sample should be selected randomly.

(b) Where a single primary sample is required for the laboratory sample, packaged products should not be opened for sampling unless the unit size, or the bulk sample size, is more than twice the minimum size required for the laboratory sample(s).

(c) Frozen products should not be thawed for sampling and should remain frozen during transit to the laboratory.

6.4 Number of primary samples to collect from a lot.

The number should be determined in accordance with Table 1.

6.5 Preparation of the bulk sample.

The bulk sample is prepared by combining and thoroughly mixing the primary samples.

6.6 Preparation of the final sample

The bulk sample should, where practicable, constitute the final sample. If the bulk sample is too large, the final sample may be prepared by a suitable method of reduction, after thorough mixing.

6.7 Preparation of the laboratory sample

Where more than one laboratory sample is required, or where the final sample is much larger than is required for the laboratory sample , the final sample should be subdivided by a suitable method of reduction, after thorough mixing. Each laboratory sample should comply with the minimum size requirements given in Table 2.

6.8 Packaging and transmission of laboratory samples

If not already packaged and protected, each laboratory sample must be placed in a clean, opaque, sealable, inert container to protect it from damage and contamination. The type(s) of container to be used should be checked for suitability with the laboratory, before adopting them.

The container(s) should be sealed so that unauthorised opening is detectable.

The laboratory sample must be delivered to the laboratory as soon as practicable, ensuring that leakage, thawing (where appropriate) or other spoilage does not occur.

7. Records

Each laboratory sample must be correctly identified by a record of the type of material; its origin (e.g., country, state, town); the location from which the sample was taken; the date of sampling; and any additional information which may be useful to the analyst or to regulatory officials.

8. Departure from recommended sampling procedures

If there is a departure from recommended sampling procedures, records accompanying the laboratory sample(s) should describe fully the procedures actually followed.

Table 1. **Minimum number of primary samples to be taken from a lot.**

Size of lot Number of containers or packaged in the lot	Minimum number of primary samples to be taken
1 - 25	1
26 - 100	5
101 - 250	10
> 250	15

Table 2. **Instructions for taking primary samples and the minimum quantity required for each laboratory sample.**

Commodity	Instructions for taking primary samples	Minimum size of laboratory samples
Group 033 **Milk**		
A. Whole liquid milk, raw, pasteurized, UHT*, sterilized. *Ultra-High Temperature	In bulk or in large containers: mix thoroughly and immediately take one or more aliquots, using a dipper. In small containers: take whole unit(s).	500 ml
Group 082 **Secondary milk products**		
A. Skimmed and semi-skimmed milk	As for whole liquid milk.	500 ml
B. Evaporated milk; evaporated full cream and evaporated skimmed milk	In bulk or in large containers: mix the contents thoroughly, scraping adhering material from the sides and bottom of the container; remove 2-3 litres, stir the aliquot and remove a portion of it. In small containers: take whole unit(s).	500 ml
C. Milk powder; whole milk or low fat	In bulk or in large containers: take one or more cores by passing a dry borer tube steadily through the powder at an even rate of penetration.	500 g
Group 087 **Derived Milk Products**		
A. Cream: fresh, frozen, UHT*, single, whipping, whipped, double and clotted *Ultra-High Temperature	In bulk or in large containers: mix thoroughly but avoid foaming, whipping and churning; take one or more aliquots using a dipper. In small containers: take whole unit(s).	200 ml
B. Butter; including whey butter and low fat spreads containing butterfat	In bulk or in large containers; take two or more cores. In packages exceeding 500 g: divide into four and take opposite quarters. In packages not exceeding 500 g: take whole unit(s).	200 g
C. Butteroil; including anhydrous butteroil and anhydrous milkfat	Mix thoroughly and take one or more aliquots	200 g
Group 090 **Manufactured Milk Products** (single ingredient)		
A. Yoghurt; natural, low fat through to full cream	Take whole unit(s)	500 g

B. Cheese; all types	Circular cheeses: remove a segment by making two cuts radiating from the centre. Rectangular cheeses: remove a section by making two cuts parallel to the sides. Small cheeses or wrapped portions: take whole unit(s).	500 g

Group 092 **Manufactured Milk Products** (multiple ingredient)

A. Dairy-based ice cream; frozen or ice confection	Take whole unit(s).	500 ml (with 5% or more milkfat) 1000 ml (with <5% milkfat)
B. Processed cheese preparations	Take whole unit(s).	500 g
C. Flavoured yoghurt	Take whole unit(s)	500 g
D. Sweetened condensed milk	As for evaporated milk.	500 ml

Group 039 Eggs

A. Chicken eggs	Take whole unshelled units	12 eggs
B. Duck eggs	Take whole unshelled units	6 eggs
C. Goose eggs	Take whole unshelled units	6 eggs
D. Quail eggs	Take whole unshelled units	24 eggs

METHODS OF ANALYSIS FOR PESTICIDE RESIDUES

1. INTRODUCTION

1.1 Scope

Hereunder are given analytical methods which can, from practical experience of the Working Group on Methods of Analysis to the Codex Committee on Pesticide Residues, be applied to the determination of pesticide residues for regulatory purposes. The list, given in par.2, is not exhaustive and methods not mentioned in the list can also be applied, provided that they can be shown to be effective.

1.2 Criteria for the selection of analytical methods

Whenever possible, the Working Group used the following criteria when selecting analytical methods:

(i) published in books, manuals or open literature; (For some newer compounds, few methods might be available from these sources; in those cases, GIFAP is prepared to supply analytical methods to regulatory authorities as a matter of routine policy and to other scientists on a case by case basis. Requests can be directed to: GIFAP, Avenue Albert Lancaster 79A, 1180 Brussels, Belgium);

(ii) collaboratively studied or known to have been validated in a large number of laboratories;

(iii) capable of determining more than one residue, i.e. multi-residue methods;

(iv) suitable for as many commodities as possible at or below the specified MRLs;

(v) applicable in a regulatory laboratory equipped with routine analytical instrumentation.

Preference was given to gas chromatography or high performance liquid chromatography as the determinative step for the methods. Under certain conditions however, methods using less sophisticated procedures, such as thin-layer chromatography or spectrophotometry, may be applicable. This may be the case, for example, when an exporting country wants to check whether or not a commodity produced in that country complies with an Codex MRL. In this case, the treatment history of the commodity may be known or assumed, so that the method used need not be as elaborate as in cases where samples of unknown treatment history are under investigation. Also, when the MRL is high compared to the limit of determination, simpler methodology may be applied in order to arrive at a "pass/no pass" decision or for quick screening purposes.

1.3 Application of methods

It will always be necessary for the analyst to validate a method before it is first applied in a practical situation. There is a further need for regular checks on the performance of the method in use at both the MRL and at the lower limit of determination. For all new pesticide/commodity combinations the method must be validated following Good Practice in Residue Analysis, (see reference 4.). Confirmation of the identity of an indicated residue by an independent technique is also to be regarded as an essential part of Good Practice in Residue Analysis, especially when the initial result suggests that an MRL is exceeded. Mass spectrometry has become for many residues the method of

choice for confimatory purposes, but the ultimate choice of a confirmatory test depends upon the technique used in the initial determination and upon the available instrumentation and necessary expertise.

1.4 References to literature

Other relevant Codex recommendations in the field of enforcement of Codex maximum limits for pesticide residues are as follows:

1. Recommended Methods of Sampling for the Determination of Pesticide Residues (Ref: *Codex Alimentarius* Vol. 2, Section 3).

2. Portion of a Commodities to which Codex Maximum Residue Limits apply and which should be analysed (Ref: *Codex Alimentarius* Vol. 2, Section 4.1).

3. Explanatory Notes on Codex Maximum Limits for Pesticide Residues (Ref: *Codex Alimentarius* Vol. 2, Section 1).

4. Codex Guidelines on Good Practice in Pesticide Residue Analysis. (Ref: *Codex Alimentarius* Suppl 1 to vol, 2. Section 4).

In paragraph 3 references can be found to:

- general articles on pesticide residue methodology (paragraph 3.1);
- manuals (paragraph 3.2);
- individual papers (paragraph 3.3).

After each reference given in paragraph 3.3, the compounds to which the methods involved apply are indicated by their CCPR-number.

2. LIST OF METHODS OF ANALYSIS

The **numbers** refer to the manuals and books listed in paragraph 3.2, the **names** to the (first) author of the papers listed in paragraph 3.3.

CCPR number	Compound	References
001	aldrin/dieldrin	1a, 1n, 1o, 1p, 2a, 2d, 2f, 3, 4 (XII-5, 6; S1-5, S8-10, S12, S19), 5, 7a (5, 6), 7c (S8-10, S12, S19), 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Ambrus, Abbott (2), Panel (4), Stijve (2, 3)
002	azinphos-methyl	2c, 2d, 2e, 2f, 3, 4 (XII-6; S5, S8, S19; 63, 63A), 7a (6), 7c (S8, S19), 7d(255), 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Panel (3)
003	binapacryl	2a, 2d, 3, 4 (XII-4, 6; S19; 8, 43), 7a (6), 7c (S19), 9b, 10 Baker, PB (2)
004	bromophos	2a, 2c, 2d, 4 (XII-3, 6; S5, S8-10, S13, S17, S19; 210, 210A), 6d, 7a (3, 6), 7c (S8-10, S13, S17, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Bottomley, Panel (7, 8), Stijve (7)
005	bromophos-ethyl	2a, 2c, 2d, 3, 4 (XII-3, 6; S8, S13, S17, S19; 263), 6d, 7a (3,6), 7c (S13, S17, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus
006	captafol	2d, 2e, 4 (XII-6; S8, S19, S20; 266, 266A), 6d, 7a (6), 7b, 7c (S8, S19, S20), 9a (M1, M12), 10 Ambrus, Baker, PB (1), Buettler, Gilvydis, Pomerantz
007	captan	2a, 2d, 2e, 3, 4 (XII-6; S8, S12, S19, S20; 12, 12A), 7a (6), 7b, 7c (S8, S12, S19, S20), 9a (M1, M12), 10 Ambrus, Baker, PB (1), Buettler, Gilvydis, Pomerantz
008	carbaryl	1q, 2d, 2e, 2f, 2g, 3, 4 (XII-6; 100), 6c, 7a (6), 9a (M2, M13), 10 Brauckhoff, Chaput, Lawrence(1)
009	carbon disulphide	9a (M8) Mestres (2)
010	carbon tetrachloride	1d, 9a (M8) Daft, Mestres (2), Panel (5)
011	carbophenothion	2a, 2c, 2d, 2e, 2f, 3, 3d, 4 (XII-5, 6; S8, S10, S13, S16, S19), 7a (5, 6), 7c (S8, S10, S13, S16, S19), 8b, 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus
012	chlordane	1a, 1o, 2a, 2d, 2f, 3, 4 (XII-5, 6; S9, S10, S12, S19), 5, 7a (5, 6), 7c (S9, S10, S12, S19), 6c, 6d, 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Panel (4), Stijve (3), Veierov
013	chlordimeform	2e, 6a, 9a (M4), 10

CCPR number	Compound	References
014	chlorfenvinphos	2c, 2d, 2e, 2f, 3, 4 (XII-3, 5, 6; S8, S13, S17, S19; 239), 5, 7a (3, 5, 6), 7c (S8, S13, S17, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Panel (7,8), Stijve (7)
015	chlormequat	6a, 9b Sachse, Stijve (5)
016	chlorobenzilate	2a, 2d, 2e, 3, 4 (XII-6; S19), 7a (6), 7c (S19), 10
017	chlorpyrifos	1p, 2a, 2c, 2d, 2e, 2f, 3, 4 (XII-6; S8, S9, S13, S19), 5, 7a (6), 7c (S8, S9, S13, S19), 8b, 8e, 9a (M2, M5, M12), 10 (Ambrus, Stijve (7))
018	coumaphos	2c, 2d, 2e, 3, 4 (XII-6; S19), 7a (6), 7c (S19), 8b, 8e, 9a (M2, M5, M12) Ambrus, Stijve (7)
019	crufomate	2d, 2e, 2f, 4 (XII-6; S19), 7a (6), 7c (S19), 8b, 8e Stijve (7)
020	2,4-D	2b, 2f, 3, 4 (27, 27A-380), 5,7d(27A-28A), 9a (M6) Ebing, Specht (1)
021	DDT	1a, 1n, 1o, 1p, 2a, 2d, 2f, 3, 4 (XII-4, 5, 6; S1-5, S8-10, S12, S19), 5, 6c, 7a (4,5,6), 7c (S8-10, S12, S19), 8a, 8b, 8c, 9a (M1, M12), 10 Abbott (2), Ambrus, Bottomley, Panel (4), Stijve (2, 3), Veierov
022	diazinon	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-5, 6; S5, S8, S10, S13, S17, S19; 35A, 35B), 6c, 7a (5, 6), 7c (S8, S10, S13, S17, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Bottomley, Panel (7), Stijve (7)
023	1,2-dibromoethane	1d, 8f, 9a (M8) Daft, Heikes, Mestres (2), Panel (5), Rains
024	1,2-dichloroethane	1d, 9a (M8) Daft, Mestres (2), Panel (5)
025	dichlorvos	2c, 2d, 2e, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S17, S19; 200), 7a (3, 6), 7c (S13, S17, S19), 8b, 8e, 9a (M2, M5), 10 Abbott (1), Ambrus, Bottomley, Panel (1, 3, 7), Stijve (7)
026	dicofol	2a, 2d, 2f, 3, 4 (XII-6; S8, S9, S12, S19; 69, 69A), 7a (6), 7c (S8, S9, S12, S19), 9a (M1, M12), 10
027	dimethoate	2c, 2d, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S17, S19; 42, 236), 5, 7a (3, 6), 7c (S8, S13, S17, S19), 9a (M5, M12), 10 Abbott (1), Ambrus, Panel (3, 7, 8), Stijve (7)
028	dioxathion	2c, 2d, 4 (XII-6; S8, S13, S19), 7a (6), 7c (S8, S9, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Stijve (7)

CCPR number	Compound	References
029	diphenyl	2d, 4 (XII-6; 256A), 7a (6), 10 Farrow, Kitada, Lord, Mestres (1), Player, Pyysalo
030	diphenylamine	2d, 2e, 4 (XII-6), 7a (6), 10 Allen (1), Luke
031	diquat	2e, 4 (37), 6d Calderbank (2), King
032	endosulfan	1b, 2a, 2d, 2f, 3, 4 (XII-5,6; S5, S8, S12, S19; 50), 5, 7a (5, 6), 7c (S19), 5, 9a (M1, M12), 10 Abbott (2), Ambrus
033	endrin	1a, 1o, 2a, 2d, 2f, 3, 4 (XII-5, 6; S5, S9, S10, S12, S19), 5, 7a (5, 6), 7c (S9-10, S12, S19), 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Abbott (2), Ambrus, Panel (4)
034	ethion	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-3, 5, 6; S8, S9, S13, S17, S19), 7a (3, 5, 6), 7c (S8, S9, S13, S17, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Stijve (7)
035	ethoxyquin	2d, 2e, 4 (XII-6; 500) Winell
036	fenchlorphos	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-3, 5, 6; S8-10, S13, S17, S19), 7a (3, 5, 6), 7c (S8-10, S13, S17, S19), 8b, 8e, 9a (M2, M5), 10 Abbott (1), Ambrus, Panel (7, 8), Stijve (7)
037	fenitrothion	2a, 2c, 2d, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S17, S19; 58), 6a, 8e, 9a (M2, M5), 10 Abbott (1), Ambrus, Bottomley, Desmarchelier, Panel (7,8), Stijve (7)
038	fensulfothion	2c, 2d, 2e, 3, 4 (XII-3, 6; S8, S13, S16, S17, S19), 6a, 7a (3, 6), 7c (S8, S13, S16, S17, S19), 9a (M2, M5), 10
039	fenthion	2c, 2d, 2e, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S16, S17, S19), 7a (3, 6), 7c (S8, S13, S16, S17, S19), 8e, 9a (M2, M5), 10 Abbott (1), Ambrus, Hill
040	fentin	2e, 4 (S24; 55A, 55B), 6e Baker, PG (1)
041	folpet	2a, 2c, 2d, 3, 4 (XII-6; S8, S12, S19, S20; 91, 91A), 7a (6), 7b, 7c (S8, S12, S19, S20), 9a (M1, M12), 10 Ambrus, Baker, PB (1), Buettler, Gilvydis, Pomerantz
042	formothion	2d, 4 (XII-6; S5, S8, S19; 236), 6b, 7a (6), 7c (S8, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus

CCPR number	Compound	References
043	heptachlor	1a, 1n, 1o, 2a, 2d, 2f, 3, 4 (XII-5, 6; S 1-4, S8-10, S12, S19), 5, 6c, 6d, 7a (5, 6), 7c (S8-10, S12, S19), 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Abbott (2), Ambrus, Stijve (2, 3), Veierov
044	hexachlorobenzene	1k, 1o, 2a, 2d, 3, 4 (XII-1, 5, 6; S9, S10, S12, S19), 5, 6c, 7a (1, 5, 6), 7c (S9, S10, S12, S19), 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Ambrus, Panel (4), Stijve (2, 3), Veierov, Zimmerli
045	hydrogen cyanide	2e, 4 (11), 9b Darr
046	hydrogen phosphide	2e, 4 (13), 9a (M8) Scudamore (2)
047	inorganic bromide	2e, 4 (S18; 149), 7c (S18), 9b Panel (2), Roughan, Stijve (1,4), VanWees
048	lindane	1a, 1o, 2a, 2d, 3, 4 (XII-5, 6; S1-5, S8-10, S12, S19), 5, 7a (5, 6), 7c (S8-10, S12, S19), 8a, 8b, 8c, 8d, 9a (M1, M12), 10 Abbott (2), Ambrus, Panel (4), Stijve (2,3), Veierov
049	malathion	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-3, 5, 6; S5, S8, S10, S13, S17, S19; 72), 7a (3, 5, 6), 7c (S8, S10, S13, S17, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Bottomley, Desmarchelier, Panel (1, 3, 7, 8), Stijve (7)
050	mancozeb	see 105: dithiocarbamates
051	methidathion	2a, 2c, 2d, 2e, 3, 4 (XII-6; S5, S8, S13, S19; 232), 6b, 7a (6), 7c (S8, S13, S19), 9a (M2, M5, M12), 10 Ambrus
052	methyl bromide	9a (M8) Mestres (2), Panel (5)
053	mevinphos	2c, 2d, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S17, S19; 93), 7a (3, 6), 7c (S8, S13, S17, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus
054	monocrotophos	1p, 2c, 2d, 2e, 2f, 4 (XII-6; S19), 7c (S19), 9a (M2, M5), 10 Ambrus
055	omethoate	1p, 2c, 2d, 4 (XII-6; S13, S17, S19; 236), 5, 7a (6), 7c (S13, S17, S19), 9a (M2, M5), 10 Abbott (1), Panel (3)
056	ortho-phenylphenol	2d, 2e, 10 Farrow, Kitada, Lord, Mestres (1), Player, Pyysalo
057	paraquat	2e, 4 (134), 6d, 7b Calderbank (1), Khan, King, Lott

CCPR number	Compound	References
058	parathion	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-3, 4, 5, 6; S5, S8, S10, S13, S17, S19; 87A, 87B), 7a (3, 4, 5, 6), 7c (S8, S10, S13, S17, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Panel (3)
059	parathion-methyl	1a, 2a, 2c, 2d, 2f, 3, 4 (XII-3, 5, 6; S5, S8, S13, S17, S19; 88A, 88B), 7a (3, 5, 6), 7c (S8, S13, S17, S19), 8e, 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Panel (3)
060	phosalone	2a, 2c, 2d, 2e, 3, 4 (XII-5, 6; S8, S19), 5, 6a, 7a (5, 6), 7c (S8, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus, Stijve (7)
061	phosphamidon	2c, 2d, 2e, 3, 4 (XII-6; S5, S13, S19), 7a (6), 7c (S13, S19), 9a (M5, M12), 10 Abbott (1), Ambrus, Bottomley
062	piperonyl butoxide	2e, 4 (XII-6; S19, S22; 163), 7a (6), 7c (S19), 9b Krause (2)
063	pyrethrins	2a, 2d, 2e, 4 (XII-6; S19, S22), 6b, 7a (6), 7c (S19), 9b
064	quintozene	2a, 2d, 2f, 3, 4 (XII-4, 5, 6; S8, S9, S12, S19; 99), 7a (4, 5, 6), 7c (S8, S9, S12, S19), 9a (M1, M12), 10
065	thiabendazole	2d, 2e, 2h, 4 (XII-6; 256A, 256B),7d (256A, 256B), 8g, 9a (M3), 10 Farrow, Kitada, Mestres (1, 3), Rajzman, Yamada
066	trichlorfon	2c, 2d, 2e, 2f, 3, 4 (XII-6; S5, S13, S19; 112), 5, 7a (6), 7c (S13, S19), 8e, 9a (M2, M5, M12) Abbott (1), Ambrus, Bottomley
067	cyhexatin	2e, 4 (S24), 6a, 9b Moellhoff (2)
068	azinphos-ethyl	2c, 2d, 4 (XII-3, 5, 6; S5, S8, S13, S17, S19; 62, 62A), 7a (3, 5, 6), 7c (S8, S13, S17, S19), 9a (M2, M5, M12), 10 Abbott (1), Ambrus
069	benomyl	see 072: carbendazim
070	bromopropylate	2a, 2d, 4 (XII-6; S19), 7a (6), 7c (S19), 9a (M12), 10 Stijve (6)
071	camphechlor	2a, 2d, 2e,4 (XII-5, 6; S9, S19), 7a (5, 6), 7c (S9, S19) Stijve (2)
072	carbendazim	2e, 2h, 4 (261, 378), 6a, 6d,7d (261, 370, 378) 9a (M3), 10 Ambrus, Farrow, Mestres (3), VanHaver

CCPR number	Compound	References
073	demeton-S-methyl	2d, 2f, 4 (XII-6; S5, S13, S16, S19), 7a (6), 7c (S13, S16, S19),9a (M2, M5), 10 Abbott (1), Ambrus, Hill, Wagner
074	disulfoton	2a, 2c, 2d, 2e, 2f, 3, 4 (XII-3, 6; S5, S8, S13, S16, S17, S19), 7a (3, 6), 7c (S8, S13, S16, S17, S19), 8e, 9a (M2, M5) Abbott (1), Ambrus, Panel (7)
075	propoxur	1e, 2d, 2g, 4 (XII-6; S19; S25; 216), 6a, 7a (6), 7c (S19), 9a (M2, M13), 10 Ambrus, Brauckhoff, Chaput, Lawrence (1)
076	thiometon	2d, 4 (XII-6; S13), 6b, 7a (6), 7c (S13), 9a (M2, M5, M10, M12) Abbott (1), Ambrus, Hill
077	thiophanate-methyl	2e, 2h, 4 (261), 5, 7d(261, 370, 378), 9a (M3), 10 Ambrus, Mestres (3), VanHaver
078	vamidothion	4 (XII-3,6; S17), 6a, 7a (3,6), 7c (S17), 9a (M2, M5, M10)
079	amitrole	2e(4A), 7d(4A) Galoux, Lokke (1), v.d.Poll
080	chinomethionate	2d, 2e, 4 (XII-6; S19; 189), 7a (6), 7c (S19), 9b, 10 Ambrus, Francoeur, Krause (1), Tjan
081	chlorothalonil	2a, 2d, 2e, 3, 4 (XII-6; S19), 6b, 7a (6), 7c (S19), 9a (M1, M12), 10 Ambrus, Lokke (2)
082	dichlofluanid	2a, 2d, 4 (XII-6; S8, S12, S19; 203; 203A, 203 -(371)), 7a (6), 7c (S8, S12, S19), 7d(203, 371, 203A, 371A), 9a (M1, M12), 10 Ambrus, Lokke (2), Brennecke (4)
083	dicloran	2d, 3, 4 (XII-6; S19), 7a (6), 7c (S19), 9a (M1), 10 Ambrus
084	dodine	2e Newsome (1)
085	fenamiphos	2c, 2d, 2e, 4 (XII-6; S8; S16; S19), 7a (6), 7c (S16, S19), 9a (M5, M12) Hill
086	pirimiphos-methyl	2a, 2c, 2d, 2e, 4 (XII-6; S8, S19; 476), 6b, 7a (6), 7c (S8, S19), 9a (M2, M5, M12), 10 Ambrus, Desmarchelier, Panel (7, 8), Stijve (7)
087	dinocap	2a, 2d, 2e, 4 (XII-6; S19; 68), 7a (6), 7c (S19), 9a (M9), 9b Ambrus
088	leptophos	withdrawn
089	sec-butylamine	2e, 6b Day, Hunter, Scudamore (1)

CCPR number	Compound	References
090	chlorpyrifos-methyl	2c, 2d, 4 (XII-6; S8, S19), 7a (6), 7c (S19), 9a (M2, M5), 10 Ambrus, Bottomley, Desmarchelier, Panel (4,8), Stijve (7)
091	cyanofenphos	2d, 4 (XII-6; S8, S19), 7a (6), 7c (S19), 9a (M2, M5), 10
092	demeton	2c, 2d, 2e, 4 (XII-6; S5, S16), 7a (6), 7c (S16), 9a (M5) Abbott (1)
093	bioresmethrin	6c, 6d, 9a (M11) Baker, PG (2), Bottomley
094	methomyl	1q, 2d, 2e, 2g, 4 (299), 6a, 7b, 9a (M13) Ambrus, Chaput
095	acephate	1p, 2c, 2d, 2e, 4 (XII-6; S19; 358), 6a, 7a (6), 7b, 7c (S19), 9a (M5, M12), 10
096	carbofuran	1e, 1q, 2e, 2g, 3, 4 (XII-6; S25), 6a, 7a (6), 7d(658, 344). 9a (M13), 10 Ambrus, Brauckhoff, Chaput, Lawrence(1), Moellhoff (1) Leppert (1, 2)
097	cartap	Official Gazette
098	dialifos	2a, 2d, 2e, 4 (XII-6; S19; 281), 7a (6), 7c (S19), 9a (M2, M5, M12), 10
099	edifenphos	2d, 4 (XII-6; S19), 7a (6), 7c (S19)
100	methamidophos	1p, 2c, 2d, 3, 4 (XII-6; S19; 358, 365), 5, 6a, 7a (6), 7c (S19), 9a(M5), 10
101	pirimicarb	2d, 4 (XII-6; S19; 309), 5, 6a, 7b, 10
102	maleic hydrazide	1m, 4 (297) Lane, Newsome (3)
103	phosmet	2c, 2d, 4 (XII-6), 7a (6), 9a (M2, M5, M12), 10 Ambrus
104	daminozide	2e, 6b Allen (2), Newsome (5), Saxton, Wright, Conditt
105	dithiocarbamates	2e, 3, 4 (S15, S21), 7c (S21), 9b Newsome (2), Panel (6), Ott
106	ethephon	2e, 9b Cochrane
107	ethiofencarb	2d, 2g, 4 (S25; 393), 9a (M13), 10
108	ethylene thiourea	1j, 4 (389), 7b, 9b Panel (9), Hirvi, Otto, Rosenberg

CCPR number	Compound	References
109	fenbutatin oxide	2e, 4 (S24), 6d Sano
110	imazalil	2d, 2e, 4 (XII-6; S19)
111	iprodione	2c, 2d, 2e, 4 (XII-6; S8, S19; 419), 6e, 7a (6), 7c (S8, S19), 9a (M1, M12), 10
112	phorate	2a, 2c, 2d, 2e, 4 (XII-3, 6; S8, S13, S16, S17, S19), 7a (3, 6), 7c (S8, S13, S16, S17, S19), 9a (M2, M5) Abbott (1), Ambrus, Hill
113	propargite	2a, 2d, 2e, 3, 4 (XII-6), 6a, 7a (6), 9a (M1) Ambrus
114	guazatine	Kobayashi
115	tecnazene	2a, 2d, 2e, 3, 4 (XII-6; S8, S12, S19; 108), 7a (6), 7c (S8, S12, S19), 9a (M1), 10
116	triforine	2e, 4 (338), 6d, 9b Bourke, Newsome (4)
117	aldicarb	1q, 2e, 2g, 4 (XII-6; 250), 6a, 7a (6), 9a (M10, M13), 10 Ambrus, Chaput
118	cypermethrin	2a, 2d, 4 (XII-6; S19, S23), 6g, 7a (6), 7c (S19), 9a (M11), 10 Ambrus, Baker, PG (2), Bottomley
119	fenvalerate	2a, 2d, 2e, 4 (XII-6; S19, S23), 6g, 7a (6), 7c (S19), 9a (M11), 10 Ambrus, Baker, PG (2), Bottomley
120	permethrin	2a, 2d, 2e, 4 (XII-6; S19, S23), 6g, 7a (6), 7c (S19), 9a (M11), 10 Ambrus, Baker, PG (2), Bottomley
121	2,4,5-T	2b, 4 (XII-6; 105), 6c, 7a (6), 9a (M6) Ebing, Lokke (3), Specht (1)
122	amitraz	2e, 4 (XII-6), 7a (6), 9b
123	etrimfos	2a, 2c, 2d, 4 (XII-6; S8, S19), 7a (6), 7c (S19), 6e, 9a (M2, M5) Ambrus, Bottomley, Panel (8)
124	mecarbam	2c, 2d, 4 (XII-6; S19), 6b, 7a (6), 7c (S19), 9a (M2),10 Abbott (1)
125	methacrifos	4 (XII-6), 7a (6) Ambrus, Desmarchelier, Panel (7, 8)
126	oxamyl	1q, 2e, 2g, 4 (XII-6; 441), 5, 7a (6), 7d (441), 9a (M13), 10 Ambrus

CCPR number	Compound	References
127	phenothrin	4 (XII-6), 7a (6), 9 Baker, PG (2), Bottomley
128	phenthoate	2a, 2c, 2d, 4 (XII-6; S19), 6b, 7a (6), 7c (S19), 9a (M11), 10 Ambrus
129	azocyclotin	4 (S24) Moellhoff (2)
130	diflubenzuron	2e, 6d, 6f, 9a (M4) Austin
131	isofenphos	2a, 2c, 2d, 2e, 4 (XII-6; S8), 7a (6), 9a (M5, M12), 10
132	methiocarb	1q, 2d, 2g, 4 (79, 79A), 9a (M2, M13), 10 Chaput
133	triadimefon	2d, 2e, 4 (XII-6; S8, S19; 425-(605)), 7a (6), 7c (S8, S19), 7d (613, 425, 605) 10 Ambrus, Brennecke (2), Ragab
134	aminocarb	2d, 10 Brauckhoff
135	deltamethrin	2a, 2d, 4 (XII-6; S19, S23), 6g, 7a (6), 7c (S19), 9a (M11) Ambrus, Baker, PG (2), Bottomley
136	procymidone	2a, 2d, 4 (XII-6; S8, S19), 7a (6), 7c (S8, S19), 10
137	bendiocarb	2d, 2g, 6d, 4 (XII-6), 7a (6), 9a (M2, M13) Ambrus
138	metalaxyl	2c, 2d, 2e, 4 (XII-6; S8, S19; 517), 7a (6), 7b, 7c (S19),9a (M4), 10 Ambrus
139	butocarboxim	2g, 9a (M13) Aharonson, Brauckhoff, Li, Muszkat
140	nitrofen	1a, 2a, 2d, 2e, 4 (XII-6; S19; 340), 6d, 7a (6), 7b, 7c (S19) Adler, Ambrus, Yu
141	phoxim	2d, 4 (XII-6; S19; 307), 7a (6), 7c (S19), 9a (M2, M12) Ambrus
142	prochloraz	2d Maclaine Pont, Somerville
143	triazophos	2c, 2d, 4 (XII-4,6; S8, S19; 401), 6d, 7a (6), 7c (S19), 9a(M2, M5, M12), 10 Ambrus

CCPR number	Compound	References
144	bitertanol	2d, 4 (XII-6; S19; 613; 613A), 7a (6), 7c (S19), 7d (613A, 426, 605), 9a (M12) Brennecke (1,3)
145	carbosulfan	2d, 4 (658 - (344)) Leppert (1,2)
146	cyhalothrin	2d, 6g
147	methoprene	2e, 6d
148	propamocarb	Gentile
149	ethoprofos	2c, 2d, 2e, 4 (XII-6; S8, S19), 7a (6), 7b, 7c (S19), 9a (M2, M5) Ambrus
150	propylene thiourea	Lembo, Nitz
151	dimethipin	2e
152	flucythrinate	2d, 2e
153	pyrazophos	2d, 4 (XII-4,6; S8, S19; 328), 6d, 7a (6), 7b, 7c (S19), 9a (M2, M5, M12), 10
154	thiodicarb	2g
155	benalaxyl	4 (S19) not published yet
156	clofentezine	Bichi, Snowdon
157	cyfluthrin	2d, 4 (S23), 9a (M11)
158	glyphosate	2e, 4 (405), 6h, 7d (405) 9b Cowell, Tuinstra, Wigfield
159	vinclozolin	2a, 2d, 4 (XII-6; S8, S19; 412), 9a (M1, M12)
160	propiconazole	2d, 4 (S19; 624), 7d (624)
161	paclobutrazol	2d Reed
162	tolylfluanid	2d, 4 (XII-6; S 8; S19: 371; 203- (371)), 7c (S8, S19), 7d (203A,371A) 9a (M1,M12) Brennecke (4) Specht (2), Anderson
163	anilazine	4 (XII-6; S19: 186), 7c (S19), 7d (186) 2d, 2e Lawrence(2), Brennecke(5)

CCPR number	Compound	References
164	demeton-S-methyl-sulphone	4(XII-6, S16, S19), 7c (S16), 9a (M5), 2d, 2e Andersson, Thornton, Wagner
165	flusilazole	2d, 4(S19)(only parent compound)
166	oxydemeton-methyl	4(XII-6, S16, S19), 7c (S16), 9a (M5), 2c, 2d, 2e Thornton, Wagner
167	terbufos	4 (S8; S19), 9a(M5) (Only parent compound), 2c, 2d, 2e Westcott
168	triadimenol	4 (XII-6, S19, 425 - (605)) 7a (6), 7c (S19), 9a (M12), 2d Allmendinger, Andersson, Brennecke (2), Ragab, Mendes
169	cyromazine	2e Cabras, Bardalaye
170	hexaconazole	2d, 11
171	profenofos	2c, 2d, 2e Andersson
172	bentazone	2e Cessna, Hogendoorn
173	buprofezin	Nishizawa JAOAC accepted for publication, Ishii (1)
174	cadusafos	2d
175	glufosinate-ammonium	4 (651), 7d (651)
176	hexathiazox	2e
177	abamectin	2e Prabhu, Vuik
178	bifentrin	2a,2e
179	cycloxydim	
180	dithianon	Baker, Kadenczki
181	myclobutanil	2e
182	penconazole	2d
183	propham	2d, 4 (s11), 6e (343-350) 7c (S11)
184	ethofenprox	

CCPR number	Compound	References
185	fenpropathrin	2, 7d (S23) Nakamura
186	metiram	see 105: dithiocarbamates
187	clethodim	
188	fenpropimorph	Kadenczki, v. Zoonen, Dieckmann, Lafuente (1,2), Tadeo
189	tebuconazole	7c(S19) Brennecke (6), Allmendinger, Maasfeld
190	teflubenzuron	
191	tolclofos-methyl	4 (s19), 7a (6), 7c (s19), 7d (S8) Becker, Ishii, Stan, Philips

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PRIORITY LIST OF COMPOUNDS SCHEDULED FOR EVALUATION OR RE-EVALUATION BY JMPR

The following is the final or tentative lists of compounds to be considered by the JMPR from 1995 to 2000.

FINAL AGENDA OF THE 1995 JMPR

Toxicological evaluation	Residue evaluation
NEW COMPOUNDS	NEW COMPOUNDS
fenarimol	chlorpropham fenarimol fenpropimorph (188)
fenpyroximate haloxyfop	fenpyroximate haloxyfop metiram (186)
PERIODIC RE-EVALUATIONS	PERIODIC RE-EVALUATIONS
benomyl (069)/carbendazim (072)/ thiophanate-methyl (077) cartap (097) fenthion (039) parathion (058) parathion-methyl (059) piperonyl-butoxide (062) quintozene (064)	cartap (097) fenthion (039) quintozene (064)
EVALUATIONS	EVALUATIONS
captan (007)	azinphos-methyl (002) bifenthrin (178) bentazone (172) buprofezin (173) chlorpyrifos (017) dithianon (180)
ethephon (106) flusilazole (165) folpet (041) iprodione (111)	metalaxyl (138) parathion (058) penconazole (182) profenofos (171) triadimefon (133)
vinclozolin (159)	

28 April 1995

TENTATIVE AGENDA OF THE 1996 JMPR

Toxicological evaluation	Residue evaluation
NEW COMPOUNDS	NEW COMPOUNDS
flumethrin tebufenozide	flumethrin tebufenozide teflubenzuron (190)
PERIODIC RE-EVALUATIONS	PERIODIC RE-EVALUATIONS
carbaryl (008) carbofuran (096)	chlorfenvinphos (014)
2,4-D (020) dimethoate (027)/omethoate (055)/formothion (042) dodine (084) ferbam maleic hydrazide mevinphos (053)	dimethoate (027)/omethoate (055)/formothion (042) ferbam phosmet (103) thiram
triforine (116) ziram	ziram
EVALUATIONS	EVALUATIONS
phorate (112)	acephate (095) aldicarb (117) DDT (021) diazinon (022) methamidophos (100) propoxur (075)

28 April 1995

TENTATIVE AGENDA OF THE 1997 JMPR

Toxicological evaluation	Residue evaluation
NEW COMPOUNDS	NEW COMPOUNDS
chlorpropham fenbuconazole	fenbuconazole
PERIODIC RE-EVALUATIONS	PERIODIC RE-EVALUATIONS
amitrole (079)	carbofuran (096) demeton-s-methyl * dodine (084)
fenamiphos (085) guazatine (114) malathion (049)	guazatine (114)
	mevinphos (053) oxydemeton-methyl (166) thiabendazole (065)
EVALUATIONS	EVALUATIONS
	chlorothalonil (081) carbosulfan (145)
lindane (048)	

28 April 1995

* data availability to be confirmed

TENTATIVE AGENDA OF THE 1998 JMPR

Toxicological evaluation	Residue evaluation
NEW COMPOUNDS	NEW COMPOUNDS
PERIODIC RE-EVALUATIONS	PERIODIC RE-EVALUATIONS
	amitrole (079) benomyl(069)/carbendazim(072)/thiophanate-methyl (077) carbaryl (008) 2,4-D (020) dicloran (083)
dicloran (083) ethoxyquin (035)	maleic hydrazide (102)
pyrethrins (063) thiometon (076)	triforine (116)
EVALUATIONS	EVALUATIONS
phosmet (103)	procymidone (136)

28 April 1995

TENTATIVE AGENDA OF THE 1999 JMPR

Toxicological Evaluation	Residue Evaluation
NEW COMPOUNDS pyrifenox PERIODIC RE-EVALUATIONS	NEW COMPOUNDS pyrifenox PERIODIC RE-EVALUATIONS ethoxyquin (035) fenamiphos (085) malathion (049) ortho-phenylphenol (056) piperonyl butoxide (062) pyrethrins (069)

TENTATIVE AGENDA OF THE 2000 JMPR

Toxicological evaluation	Residue evaluation
NEW COMPOUNDS PERIODIC RE-EVALUATIONS	NEW COMPOUNDS PERIODIC RE-EVALUATIONS thiometon (076)

28 April 1995

ANNEX 1

CANDIDATE COMPOUNDS FOR PERIODIC REVIEW NOT YET SCHEDULED

Acephate	Amitraz	Azocyclotin	Bendiocarb
Captan	Chlorpyrifos	Cyhexatin	Cypermethrin
Deltamethrin	Dichlofluanid	Diflubenzuron	Diphenylamine
Etrimfos*	Fenitrothion	Fenvalerate	Folpet
Imazalil	Isofenphos	Mecarbam	Metalaxyl
Methacrifos	Methiocarb	Methomyl	Oxamyl
Parathion	Parathion-methyl	Permethrin	Phenothrin
Phenthoate	Phorate	Phoxim	Pirimicarb
Propargite	Triazophos	Vamidothion	

* Lack of manufacturer support noted for these compounds; to be confirmed by GIFAP.