codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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

ALINORM 91/24

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Eighteenth Session
Rome, 1-10 July 1991

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

The Hague, 23-30 April 1990

Note: This document incorporates Codex Circular Letter CL 1990/20-PR.

W/Z6138

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CX 4/40.2
CX 2/7.2

CL 1990/20-PR
May 1990

TO: - Codex Contact Points
- Participants at the 22nd 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: **Report of the Twenty-second Session of the Codex Committee on Pesticide Residues**

The report of the 22nd Session of the Codex Committee on Pesticide Residues (CCPR) (Ref. ALINORM 91/24) will be considered by the 19th Session of the Codex Alimentarius Commission to be held in Rome from 1-10 July 1991.

PART A: MATTERS OF INTEREST TO THE CODEX ALIMENTARIUS COMMISSION

(1) Draft MRLs and draft amendments to Codex MRLs at Steps 5 and 8

These will be included in document ALINORM 91/24-Add.1 and distributed separately prior to the Commission's session.

(2) Proposed non-substantial changes to Codex Maximum Residue Limits

These will be included in document ALINORM 91/24-Add.1 and distributed separately prior to the Commission's session.

(3) Other matters requiring action by the Commission will be included in document ALINORM 91/21 to be distributed prior to the Commission's session.

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

(1) Re-evaluation of Pesticides evaluated prior to 1976 (paras.356-360, ALINORM 91/24)

Governments are requested to inform the Chairman of the Working Group on Priorities of any registered uses in their countries for the pesticides listed in Groups 1 and 3, Appendix V, ALINORM 91/24. Governments and companies are requested to provide information on data availability to Dr. J. Taylor, Pesticides Directorate, Agriculture Canada, SBI Building, 2nd Floor, 2323 Riverside Drive, Ottawa, Ontario K1A OC6, Canada, **not later than the end of December 1990**, with a copy to this office.

(2) Inclusion of further pesticides in the Codex Priority Lists (paras. 353-354, ALINORM 91/24)

Governments wishing to propose the pesticides mentioned in para. 353, ALINORM 91/24 for inclusion in the Codex Priority List or other pesticides are requested to contact Dr. J. Taylor, Pesticides Directorate, Agriculture Canada, SBI Building, 2323 Riverside Drive, Ottawa, Ontario K1A 0C6, Canada, with a copy to this office.

(3) Specific requests for residues and toxicological data

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

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

(i) Pesticides for which MRLs are being elaborated

ALDRIN AND DIELDRIN (001)	- Monitoring data on fruits and vegetables (para. 261, ALINORM 91/24).
CAPTAN (007)	- Data for review of captan on cherries and potatoes by the 1990 JMPR and any other relevant data (para. 76, ALINORM 91/24).
DDT (21)	- Information on current GAP and actual residue levels either based on uses or on monitoring data in support of existing MRLs (para. 77, ALINORM 91/24).
DIAZINON (22)	- GAP and relevant residue data on fruits and vegetables (para. 265, ALINORM 91/24).
DICOFOL (26)	- GAP and relevant residue data on fruits and vegetables (para. 268, ALINORM 91/24).
DIMETHOATE (027)	- Data obtained using current methods of analysis on wheat and other commodities (paras. 78-79, ALINORM 81/24).
ENDOSULFAN (032)	- Residues and GAP data (paras. 82-89, ALINORM 91/24).
	- New data for wheat and milk including monitoring data have been requested, in addition to residues in animal feeds (para. 90, ALINORM 91/24).
OMETHOATE (055)	- Further data on residues, especially for stone fruits (para. 96, ALINORM 91/24).
ORTHO-PHENYLPHENOL (056)	- Information on registered uses for melons, except watermelon (paras. 97-98, ALINORM 91/24).

PARATHION (058)	- GAP and residue data for fruits and vegetables (para. 273, ALINORM 91/24).
CYHEXATIN (067)	- Data on current GAP for common bean, kiwifruit, peach, plums and strawberries, (para. 101, ALINORM 91/24).
CARBENDAZIM (072)	- GAP data particularly for post-harvest uses (paras. 102-115, ALINORM 91/24).
DEMETON-S-METHYL (073) DEMETON-S-METHYLSULPHON (164) OXYDEMETON-METHYL (166)	- Updated information on residue data and GAP (paras. 116-118, ALINORM 91/24).
PROPOXUR (075)	- GAP and residue data for fruits and vegetables (para. 277, ALINORM 91/24).
CHLOROTHALONIL (081)	- Residue data on grapes (para. 121, ALINORM 91/24).
METHAMIDOPHOS (100)	- Information on reduction factors for cooking and processing several commodities (para. 141, ALINORM 91/24).
DITHIOCARBAMATES (105)	- Data including residues and GAP in order to confirm the estimated TMRLs (para. 149, ALINORM 91/24).
ETHYLENETHIOUREA (ETU) (108)	- New residue data obtained with current methods of analysis (para. 151, ALINORM 91/24).
PHORATE (112)	- Information to establish reduction factors for use in intake estimation (para. 155, ALINORM 91/24).
ALDICARB (117)	- Residue data on citrus fruits (para. 159, ALINORM 91/24).
CYPERMETHRIN (118)	- Residue data on berries and other small fruits (para. 160, ALINORM 91/24).
FENVALERATE (119)	- GAP data on brussels sprouts (para. 161, ALINORM 91/24).
ETRIMFOS (123)	- Residue and GAP data on grapes, wine and lettuce head (para. 167, ALINORM 91/24).
METHACRIFOS (125)	- Data on GAP for all commodities (para. 169, ALINORM 91/24).
AZOCYCLOTIN (129)	- In the case that registered uses have changed, current use pattern data is requested (para. 171, ALINORM 91/24).
BENDIOCARB (137)	- Information on registered uses for pome fruits, barley, oats and wheat (para. 183, ALINORM 91/24).
BITERTANOL (144)	- Data on a dry weight basis on bean forage and peanut forage (para. 193, ALINORM 91/24).

FLUCYTHRINATE (152)	- Information on registered use and residue data on maize fodder (para. 200, ALINORM 91/24).
ANILAZINE (163)	- Residue data on celery (paa. 228, ALINORM 91/24).
FLUSILAZOLE (165)	- GAP data on dried grapes and grapes (para. 239, ALINORM 91/24).
TERBUFOS (167)	- Relevant data for establishing reduction factors for estimation of the EMDI (para. 243, ALINORM 91/24).
	- Data from recent trials based on current GAP on potato (para. 250, ALINORM 91/24).
TRIADIMENOL (168)	- Residue data on grapes (para. 257, ALINORM 91/24).

(ii) Evaluation of Pesticides for which Guideline Levels have been set

COUMAPHOS (018)	- Data on current GAP for evaluation by the 1990 JMPR (para. 280, ALINORM 91/24).

(iii) Residue Data from Monitoring Programmes

Governments are requested to provide residue data from monitoring programmes on aldrin, dieldrin and endrin for the proposal of ERLs to replace MRLs (para. 357, ALINORM 91/24).

(4) Fumigant Residue in Food

Data on fumigants received from several countries were discussed at the 22nd Session of the CCPR (paras. 287-301, ALINORM 91/24). Governments are requested to provide information on the use and residues in food of the following fumigants:

METHYL BROMIDE (052)
PHOSPHINE
ETHYLENE DIBROMIDE
ETHYLENE OXIDE
HYDROGEN CYANIDE

Information should be sent to Mrs. M. Freund, Head of Pesticide Registration, Department of Plant Protection and Inspection, Ministry of Agriculture, P.O. Box 78, Bet Dagan 50250, Israel, as soon as possible and preferably not later **than the end of December 1990**, with a copy to this office.

(5) Method of Sampling for the determination of pesticide residues in meat and poultry products for control purposes

The Committee agreed to add the inclusion referred to in paragraph 314 of the report (ALINORM 91/24) to the proposed method of sampling (ALINORM 89/24A, Appendix II) at the beginning of Item 2, Part A, Introduction, and to return the amended document to Step 6.

Governments are requested to submit any additional comments to Mr. Richard Carnevale, Office of Science and Technology, Food Safety Inspection Service, 300 12th Street, S.W., Washington, D.C. 20250, U.S.A., with a copy to this office, **preferably not later than the end of December 1990.**

(6) Codex Maximum Limits for Pesticide Residues in Processed Foods (paras. 364-366, ALINORM 91/24)

On several occasions the CCPR had considered the problem of residues of pesticides in processed foods, and at its 14th Session agreed that it would be feasible and desirable to cover pesticide residues in processed foods. The Room Document 12, attached as Appendix VI to ALINORM 91/24, contains a summary of the decisions taken by CCPR on the subject at earlier sessions.

Governments are requested to provide their comments on the Codex general approach to define MRLs in processed foods to Ir. Jan van der Kolk, Foodstuffs Division, Ministry of Welfare, Health and Cultural Affairs, P.O. Box 5406, 2280 HK Rijswijk, The Netherlands, with a copy to this office, preferably **not later than the end of December 1990.**

(7) Expression and Application of MRLs for Fat and Soluble Pesticides in Meat, Animal Fat and Edible Offal (Mammalian)

A proposal to express MRLs in meat on the basis of MRLs in fat, as referred to in para. 368, ALINORM 91/24 was analysed by the Committee which decided to request comments on this subject.

Governments are requested to provide comments to Dr. L. Tuinstra, Chairman of the Working Group on Methods of Analysis, Ministry of Agriculture and Fisheries, State Institute for Quality Control of Agricultural Products, P.O. Box 230, 6700 AE Wageningen, The Netherlands, with a copy to this office, preferably **not later than the end of December 1990.**

(8) Request for Comments on Draft Codex Maximum Residue Limits at Steps 3 and 6 of the Codex Procedure

The proposed maximum limits for pesticide residues included in this paper were discussed at the 22nd Session of the CCPR. In accordance with the Codex Procedure, they are sent to members of the Commission and interested international organizations for comments on all aspects, including possible implications of the draft standard for their economic interests. Comments should be sent to Ir. Jan van der Kolk, Ministry of Welfare, Health and Cultural Affairs, Foodstuffs Division, P.O. Box 5406, 2280 HK Rijswijk, The Netherlands, with a copy to this office, preferably **not later than the end of December 1990.**

32 ENDOSULFAN

ADI 0.006 mg/kg body weight : (1989)
Residue Sum of alpha- and beta- endosulfan sulphate (fat-soluble residue (15.104)

	MRL (mg/kg)	Step	JMPR	CCPR
MM 95 Meat	0.2 (fat)	6 1/	74	14.81: 22.90
ML 106 Milks	0.02 F	6 1/	74	14.81: 22.90

1/ Governments are requested to respond to CL 1990/5 so that the JMPR can re-evaluate these limits (see 13.74).

47 INORGANIC BROMIDE

ADI 1.0 mg/kg body weight
Residue Determined and expressed as total bromide from all sources

	MRL (mg/kg)	Step	JMPR	CCPR
VS 624 Celery	300	6	83	22.94

57 PARAQUAT

ADI 0.004 mg/kg body weight : mg paraquat cation/kg body weight
Residue Paraquat cation

VD 541 Soya bean (dry)	0.2	6(a)	81	18.98: 22.100

86 PIRIMIPHOS-METHYL

ADI 0.01 mg/kg body weight : (1976)
Residue Pirimiphos-methyl (fat soluble residue)

OR 697 Peanut oil (edible)	10 PoP	6		22.123

94 METHOMYL

ADI 0.03 mg/kg body weight : (1989)
Residue Sum of methomyl and methyl hydroxythioacetimidate ("Methomyl oxime"), expressed as Methomyl (JMPR 88)

FB 269 Grapes	5	6	75, 88	21.123: 22.132

112 PHORATE

ADI 0.0002mg/kg body weight : (1985)
Residue Sum of phorate, its oxygen analogue, and their sulphoxides and sulphones, expressed as phorate(18.128)

ML 106 Milks	0.05 (*)	6	77,84	22.156

155 BENALAXYL

ADI 0.05 mg/kg body weight : (1987)
Residue Benalaxyl

FB 269 Grapes	0.2 1/	6	86,88	20,170, 20.204

1/ Changed from 0.5 mg/kg by 1990 JMPR

158 GLYPHOSATE

ADI 0.3 mg/kg : (1986)
Residue Glyphosate (see 21.218)

		MRL (mg/kg)	Step	JMPR	CCPR
CM 654	Wheat bran, unprocessed	40 1/	6	88	21.219; 22.215

1/ Previously 50 mg/kg

162 TOLYFLUANID

ADI 0.1 mg/kg body weight : (1988)
Residue Tolyfluanid

FP 9	Pome Fruits	5	6	88	21.226

167 TERBUFOS

ADI 0.0002 mg/kg body weight : (1989)
Residue Sum of terbufos, its oxygen analogue and their sulphoxides and sulphones, expressed as terbufos

VR 589	Potato	0.5 T	3	89	22.250
VO 447	Sweet corn (kernels)	0.5 T	3	89	22.254

SUMMARY AND CONCLUSIONS

The twenty-second session of the Codex Committee on Pesticide Residues (CCPR) reached the following conclusions during its deliberations, presented in order of the Agenda:

1. The report of the 1989 Joint FAO/WHO Meeting on Pesticide Residues (JMPR) was discussed in detail (paras. 27-41). The Committee noted that the JMPR reaffirmed the principles to establish separate MRLs for pesticides that are also metabolites of other pesticides (para. 33).

2. The Committee received a report on replies received in response to the questionnaire on national regulatory practices for pesticide residues in food and noted that most of the governments that had responded to the questionnaire had used the new form of acceptance "free distribution" and it was expected that more countries would be able to utilize this form of acceptance for Codex MRLs. The Committee was also informed that the EEC would make every effort to accept Codex MRLs (paras. 42-44).

3. The Committee was informed that a new form of declaration of acceptance had been despatched to all member countries and international organizations and urged governments and economic groupings to notify the Codex Secretariat of their acceptances or non-acceptances of Codex MRLs through this form (paras. 45-46).

4. The Committee received a report from WHO on the Guidelines for Predicting Dietary Intake of Pesticide Residues and it was stressed that TMDIs and EMDIs are simplified evaluations that are likely to represent large over-estimates of intake and that calculations of EDIs be performed at national level. Reports from GEMS/Food and from national monitoring programmes were received (paras. 48-66).

5. The Committee decided to refer the definition of portion of commodity to which MRLs apply for the oilseed group to the Working Group on Methods of Analysis and agreed with the updating and publication of Part 6 of the Guide in Volume II of the Revised Codex Alimentarius (paras. 69-70).

6. Draft MRLs were considered in the light of comments received. The Committee discussed the status of general Codex MRLs for fruits and vegetables and decided to recommend to the Commission the delegation of several Codex MRLs and to postpone the consideration of possible withdrawal for other MRLs in the light of new requested comments (paras. 260-277).

7. Guideline levels were reviewed and several GLs were maintained awaiting additional data (paras. 278-286).

8. On the basis of comments received, the Committee identified a list of priorities for several compounds used as fumigants and invited delegates to submit comments before discussion at the next session (paras. 287-301).

9. The Committee discussed the document of the Workshop on MRL Development and a proposal to establish an Ad Hoc Working Group to review current JMPR and Codex procedures with a view to facilitating the acceptance by countries of Codex Maximum Residue Limits.

SUMMARY AND CONCLUSIONS (Cont'd)

It was agreed that:

- proposed guidelines for submitting GAP information to JMPR and guideline on the evaluation of residues data and the estimation of MRLs should be developed by FAO in consultation with the CCPR;

- an Ad Hoc Working Group on Acceptances be established to study means of improving the acceptability of Codex MRLs to member countries;

- a draft working paper would be prepared in time for the FAO/WHO Conference on Food Standards, Chemicals in Food and Food Trade (paras. 302-311).

10. The Committee agreed to return the amended Method of Sampling for the determination of pesticide residues in meat and poultry products for control purposes to Step 6 for comments (paras. 313-318).

11. A new version of the list of recommended methods of analysis will be prepared in 1991 and an updated version of Part 7 of the Guide would be issued. Further limits of determination for several pesticides were recommended. The Working Group on Methods of Analysis was requested to explore the possibilities of exchange of information on the extension of multi-residue methods to new substances and substrates (paras. 319-326).

12. The Committee made recommendations concerning pesticide residue problems in developing countries. Assistance was requested from UN Agencies, GIFAP and manufacturers of pesticides in order to establish regulatory infrastructure and to obtain analytical standards to strengthen the analytical capabilities of the countries for determination of pesticide residues.

    Developing countries should generate data on GAP supported from the manufacturer, and seminars and workshops should be organized for better understanding of GAP and acceptance of Codex MRLs.

    The Committee agreed that a questionnaire should be designed to collect relevant information from all the developing countries and supported the recommendation that importing countries should accept Codex MRLs where national tolerances do not exist (paras. 328-349).

13. Priority lists of pesticides were adopted for the guidance of the JMPR, governments and industry regarding the generation of data and the evaluation of pesticides and their residues. A tentative agenda for the JMPR was drawn up until 1995 (Appendix V, Part II). The Committee agreed that the CXLs be deleted for several compounds evaluated prior to 1976 and for which there appears to be no continued support for registration. For other compounds additional information has been requested and JMPR reviews will be scheduled. A list of pesticides evaluated between 1976 and 1980 will be discussed at the next session of the CCPR (paras. 356-363).

14. The Committee considered the problem of residues of pesticides in processed foods and the guidelines adopted by the Committee at its 12th Session. Controversial opinions were expressed by several countries on the establishment of MRLs in wine and the Committee decided to request comments on this subject which will be considered as a general approach for processed foods at the next session (paras. 364-366).

SUMMARY AND CONCLUSIONS (Cont'd)

15. The expression and application of MRLs for fat soluble pesticides in meat, animal fat and edible offal (mammalian) was discussed. The Committee considered the proposal to adopt the same procedure as an EEC directive which proposes a cut off point at 10% fat level. The Committee decided to request comments on the proposal and to refer the matter to the Working Group on Methods of Analysis (paras. 367-368).

16. The Government of Cuba extended an invitation to the Netherlands to hold a future session of the CCPR in Havana. After evaluation of the facilities existing by the Chairman of the Committee, Cuba would extend a formal invitation (para. 369).

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APPENDICES

INTRODUCTION

1. The Codex Committee on Pesticide Residues held its 22nd Session in The Hague, The Netherlands, from 23-30 April 1990. Mr. J. van der Kolk, Public Health Officer of the Ministry of Welfare, Health and Cultural Affairs, acted as Chairman. The Session was attended by Government delegates, experts, observers and advisers from the following 48 countries:

Algeria	Argentina
Australia	Austria
Belgium	Botswana
Canada	Chile
China, People's Rep. of	Cuba
Czechoslovakia	Denmark
Dominican Republic	Egypt
El Salvador	Finland
France	Gabon
German Dem. Rep.	Germany, Fed. Rep. of
Greece	Hungary
India	Iran
Iraq	Ireland
Israel	Italy
Japan	Libya
Malaysia	Mexico
Morocco	Mozambique
Netherlands	New Zealand
Norway	Poland
Portugal	Republic of Korea
San Marino	Sweden
Spain	Switzerland
Thailand	United Kingdom
United States of America	Yugoslavia

The following International Organizations were also represented:

Association of Official Analytical Chemists (AOAC)
European Economic Community (EEC)
Council of Europe
International Federation of National Associations of Pesticide Manufacturers (GIFAP)
International Dairy Federation (I.D.F.)
International Organization of Consumer's Unions (IOCU)
International Union of Pure and Applied Chemistry (IUPAC)

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

OPENING OF THE SESSION (Agenda Item 1)

2. The Session was opened by Mr. H.J. Simons, State Secretary of the Ministry of Welfare, Health and Cultural Affairs. The text of Mr. Simons' speech is attached as Appendix II.

3. The Chairman thanked the State Secretary for his inspiring words which stressed the importance of the work of the Committee and confirmed The Netherlands' intention to provide continuing support to the Committee.

ADOPTION OF THE AGENDA (Agenda Item 2)

4. The agenda and the time schedule for the plenary session and for Working Groups were announced in CX/PR 90/1. On the request of the delegation of Ireland an agenda item concerning acceptances by Governments of Codex Maximum Residue Limits was added as item 6(e) CCPR Procedures to Facilitate Acceptances.

APPOINTMENT OF RAPPORTEURS (Agenda Item 3)

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

MATTERS OF INTEREST TO THE COMMITTEE (Agenda Item 4)

6. The Committee had before it document CX/PR 90/4 containing matters of interest to it arising from the 18th Session of the Codex Alimentarius Commission and from Sessions of Codex Committees.

(a) Matters arising from the 18th Session of the Commission

Revised Publication of the Codex Alimentarius

7. The Committee noted that Vol. II of the revised Codex Alimentarius would contain the MRLs for pesticides presently in Vol. XIII as well as all the parts of the guide.

Acceptance of Standards by Regional Economic Groups

8. The Commission had agreed to the acceptance of Codex standards and Codex MRLs by regional economic groupings, in those cases where competence to accept had been transferred to them by the Member States. The Committee noted that this would mean that the European Communities could accept Codex standards and Codex MRLs in the future on behalf of its Member States.

Types of Acceptance for Maximum Residue Limits

9. The Commission had adopted the recommended forms of acceptance for MRLs limited to i) full acceptance and ii) free distribution. The Committee noted that a new format for the declaration of acceptances of MRLs for Pesticides had been prepared by the Codex Secretariat and distributed to Codex Contact Points and that the new format had a provision for declaration of "non-acceptance".

Definition of Good Agricultural Practice and Maximum Residue Limit

10. The Committee noted that the new definitions for Good Agricultural Practice and Maximum Residue Limits that it had proposed at its last (21st) Session had been adopted by the Commission.

Recommendations for Methods of Analysis

11. The Committee noted that the most recent list of methods of pesticide residue analysis as contained in Part 8 of the Guide, would be published in Vol. II of the revised Codex Alimentarius.

Implications of Biotechnology on International Standards and Codes of Practice

12. The Committee noted that the paper on the above subject (ALINORM 89/36) considered by the Commission would be brought to the attention of JMPR and circulated to Codex Contact Points for comments. The Committee agreed to consider these comments at its next (23rd) Session. The Committee was informed about the upcoming Joint FAO/WHO Expert Consultation on Biotechnology to be held in Geneva in November 1990 and noted that the report of the consultation would be available to it for consideration at its next Session.

(b) **Matters arising from Codex Committees**

Codex Committee on Fish and Fishery Products

13. The Committee noted that the CCFFP would be elaborating a Code of Hygienic Practice for Aquaculture and agreed to co-operate with the CCFFP on aspects of the Code relating to pesticide residues.

Codex Committee on Residues of Veterinary Drugs in Foods

14. The Committee noted that the CCRVDF had agreed to use the definitions contained in the CCPR Classification of Foods and Animal Feeds in the elaboration of its glossary of terms.

IDF Standard for Determination of Organophosphorus Compounds in Milk

15. The Committee noted with interest the development of an IDF standard for determination of organophosphorus compounds in milk. The Committee agreed that the standard, when available, should first be reviewed by the Working Group on Methods of Analysis which would report its observations to the plenary at its 23rd Session.

Organically Produced Foods

16. The Committee noted the upcoming discussions on the subject at the meetings of the Coordinating Committees of Europe and of North America and the Southwest Pacific and wished to be kept informed of the developments.

Measuring of Pollution from Pesticides and other Toxic Substances

17. The Committee noted the international recommendation (Ref. No. OIML, R82, 1989 Edition) on "Gas chromatographs for measuring pollution from pesticides and other toxic substances" published by the "Organisation Internationale de Métrologie Légale (OIML)" and asked the Working Group on Methods of Analysis to review and report to the plenary.

(c) **Matters Arising from Work of FAO**

18. The Representative of FAO gave an outline of matters of interest to the Committee.

Prior Informed Consent (PIC)

19. During the last FAO Conference in December 1989 the inclusion of the Prior Informed Consent (PIC) clause into the International Code of Conduct on the Distribution and Use of Pesticides had been unanimously endorsed and its immediate implementation requested. Presently a joint programme with UNEP to implement PIC was being initiated. Within two months over 70 countries had designated national

authorities (DNA's) as contact points for the operation of PIC. A joint data base with UNEP would be established and decision guidance documents were being developed. The first batch of compounds under the PIC scheme would contain those pesticides which had been banned by more than 10 countries on the basis of definitions under the Code. FAO would act as the PIC contact point and the international source of information on pesticides.

Assistance

20. i) The regional assistance project for South East Asia and the Pacific, "Implementation of the International Code of Conduct on the Distribution and Use of Pesticides", financed by the Government of Japan, was fully operational.

ii) A similar project for Africa was awaiting financial approval by UNDP, to be started most likely during the second half of 1990.

iii) The Government of the Netherlands was funding a project formulation mission for a 5-year project on the implementation of the Code in Central America.

iv) Technical Cooperation Projects (TCP) for Ghana, Gambia, Somalia, Yemen Arab Republic, and Pakistan provided assistance in implementing pesticide registration and control or improving pesticide management. In Ghana, Gambia and Pakistan basic formulation control laboratories for regulatory purposes were being established.

Training

21. Several training courses on the safe and efficient use of pesticides took place and/or were planned for Central America, Africa and Asia.

Workshop

22. i) A workshop for 14 West African countries on pesticide management had been conducted in Ghana in September 1989. One of the recommendations, to establish sub-regional/regional Technical Cooperation Networks, will be implemented.

ii) A similar workshop for southern African countries was under preparation and would be held in Harare/Zimbabwe in December 1990.

Pesticide Guidelines and Specifications

23. New guidelines to support the implementation of the Code of Conduct were under preparation. Additional specifications for Plant Protection Products were being elaborated.

(d) Matters arising from International Organizations

Council of Europe

24. The Representative of the Council of Europe informed the Committee on the activity programme of the Council of Europe in the field of pesticides. Within the Council of Europe there was a Secretariat for Public Health and within the Secretariat for Public Health there was a Committee of Experts on Pesticides. Activities in the pesticide field were not directed to MRLs and were specifically

related to public health questions. Some time ago guidelines concerning wood protection products had been published and at present the main activity concerned the registration of pesticides. By 1968 the Council of Europe had published a set of guidelines on the registration of pesticides, dealing with the different aspects of registration of a pesticide to be followed by a manufacturer in submitting a new pesticide substance to the national authorities. At present the 7th edition of these guidelines, "Pesticides", was being prepared and would be published before the end of this year. A particular chapter in the 7th edition of the booklet "Pesticides" would be devoted to environmental problems such as ecotoxicity problems of pesticide residues in the soil and in the ground water. With regard to ecotoxicity the Council of Europe together with EPPO recently organised an international workshop on this topic and a European strategy on the ecotoxicity of pesticides is now developed by both groups. The problems of pesticide registration through data bases at national level had been discussed recently with representatives and experts from Western and Eastern Europe, at a Meeting organised jointly by the Council of Europe and EPPO. A new important topic, the problem of non-agricultural pesticides, had been included this year in the work programme and it was envisaged that guidelines in this field would be established within the next two years. The problem of ground water and pesticide residues was part of a study and would be discussed at a symposium this year.

International Union of Pure and Applied Chemistry (IUPAC)

25. The observer from IUPAC brought to the attention of the Committee an error in para. 252 of the report of the 21st session of the CCPR (ALINORM 89/24A) and informed the Committee that the workshop being organized at the next IUPAC Congress to be held in Hamburg was on principles of quality assurance for pesticide residue analysis. The Committee noted that the final programme of the congress was being disseminated to all concerned.

26. The Delegation of Sweden informed the Committee on the progress of its programme of reducing the amount of pesticides used in agriculture.

CONSIDERATION OF THE REPORT OF THE 1989 JOINT FAO/WHO MEETING ON PESTICIDE RESIDUES (JMPR) (Agenda Item 5)

27. The report was briefly introduced by the JMPR Joint Secretaries, Mr. F.W. Kopisch-Obuch (FAO) and Mr. J.L. Herrman (WHO).

28. The agenda of the 1989 JMPR had to be modified slightly due to late submission or lack of data.

29. Special reference was made to lindane where the Meeting was unable to evaluate the compound because of inadequate response to the repeated requests of the CCPR for the submission of current information on use pattern and residue data.

30. The Meeting endorsed the definitions of Good Agricultural Practice (GAP) and Maximum Residue Limits (MRL) as revised by the 1989 CCPR.

31. The Meeting agreed that MRLs below 10 mg/kg should be expressed to only one significant figure. The Committee noted that figures given for expression of residue limits were only examples and did not cover all possible expressions.

32. The Meeting wished to point out that an MRL estimated "at or about the limit of determination" does not always necessarily imply that residues of that pesticide do not occur in the commodity under question. Clarification of this point was

needed in light of the statement in the 1989 JMPR Report that such MRLs need not be included in predictions of intake of a particular pesticide.

33. The Meeting reaffirmed the principles set out in the 1987 JMPR Report to establish separate MRLs for pesticides that are also metabolites of other pesticides. The Meeting recommended that when reviews of any such compounds are required by future JMPR's, all compounds related in this way should be considered at the same Meeting.

34. Upon a suggestion of the 1989 CCPR the Meeting considered the feasibility of extrapolation from existing data to cover commodities of interest to developing countries. The Meeting pointed out that complete GAP information for the relevant crops, a reference to the residue data base used to support the original MRL and a suggested logic for the extrapolation are required for extrapolation of a pesticide MRL from one crop to another. The Meeting invited the CCPR ad hoc Working Group on Pesticide Residue Problems in Developing Countries to supply examples of desired extrapolation. The Meeting reaffirmed that decisions to extrapolate would be on a case-by-case basis.

35. The Meeting considered the estimation of separate MRLs for table and wine grapes in the case of triadimefon or in future situations. The Meeting concluded that separate limits could be established as long as adequate separate data bases are available as well as adequate and distinct information on uses. The Meeting further concluded that while it may be considered desirable by some governments to estimate separate MRLs for table and wine grapes at the national level, at this time there is no need to do so at the international level.

36. The representative from the EEC welcomed the suggestions of JMPR for estimating MRLs for commodities of interest by extrapolation from existing residue data and informed the Committee that the Community follows such a procedure especially for determination of MRLs of food commodities within the same group.

37. Referring to the proposal of the JMPR to establish separate MRLs for table and wine grapes, the Committee began a discussion on whether MRLs were appropriate for wine as an item of international trade rather than wine grapes. Recalling that it had previously established MRLs for some processed products (e.g. cereal products), the Committee decided to pursue the issue of MRLs for wine within the framework of processed foods. A full discussion was postponed until later in the agenda (para 359 to 361).

38. The Representative of WHO informed the Committee that a total of 19 pesticides was evaluated toxicologically. As of the time of the 1989 Joint Meeting, all the pesticides recommended for attention by the CCPR had been evaluated.

39. An important general item that was discussed had to do with the importance of human data when re-evaluating pesticides that have been in use for many years. Section 2.4 stressed the need for these data when re-evaluating pesticides.

40. Five substances were evaluated for the first time. Acceptable Daily Intakes (ADIs) were established for four of them. The other one, triazolylalanine, was on the agenda because it is a plant metabolite that is produced following the use of several pesticides. The Joint Meeting did not establish an ADI for this substance, but it concluded that residues of triazolylalanine arising from the use of triazole fungicides do not present a toxicological hazard. Temporary ADIs were extended for ethion and 2-phenylphenol.

41. Section 2.2 mentioned the preparation of the document "Principles for the Toxicological Assessment of Pesticide Residues in Food". This document, which should be helpful to the JMPR for ensuring consistency in using up-to-date procedures in its decision-making process, would soon be available.

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

(a) Questionnaire on national regulatory practices for pesticides residues in food

42. The Committee considered the paper CX/PR 90/5 and received a verbal presentation of this document from Mr. J. Wessel (United States of America) on replies received in response to the Questionnaire. The number of responding countries was 25 and several conclusions were obtained from the response. Virtually all the responding countries indicated that they considered the work of the CCPR to be useful and important for facilitating international food trade and for protecting consumer health. Many responding countries had applied a Codex MRL to imported foods in a situation for which there was no established national limit for the pesticide residue. Most of the 25 governments that responded to the questionnaire had used the new form of acceptance "free distribution" and it was expected that more countries would be able to utilize this form of acceptance for Codex MRLs. Some discouraging aspects appearing from the questionnaire were the numerous reasons given as to why governments cannot always accept Codex MRLs and the concern that national GAP does not support a Codex MRL higher than the national limit.

43. The delegations of Malaysia and Cuba informed the Committee that answers to the questionnaire had been sent from these countries. These delegations would provide copies to Mr. J. Wessel in order to update the summary of responses.

44. The delegation of Australia noted that one factor cited as adversely affecting acceptance was that the EEC may prevent member countries from accepting Codex MRLs that differ from those of the EEC and expressed concern that such a situation could make harmonization even more complex. The representative of the EEC informed the Committee that in 1989 the Codex Commission had agreed to acceptance of Codex standards by regional economic groups when Member States had transferred this authority. After completing certain internal legal formalities the EEC would be in a position to consider Codex MRLs for acceptance. The EEC had used the Codex Classification to a very large extent and would make every effort to accept Codex MRLs.

(b) Summary of Acceptances Received since the 21st Session of the Committee

45. The Committee received a report on the status of acceptances (CX/PR 90/6) published up to the 18th Session of the Commission. In view of the revised acceptance procedure adopted by the Commission the Codex Secretariat had not received any notifications of acceptances since the 21st Session of the CCPR.

46. The Committee was informed that a new form for the declaration of acceptance or non-acceptance of Codex MRLs adopted by the Commission up to and including its 18th Session, had been prepared and despatched to all member countries and international organizations to which competence in the matter of acceptance of Codex Standards has been transferred by their Member States. This form is intended to assist FAO and WHO in compiling an Official Register of Government Declarations of Acceptance or Non-Acceptance of Codex MRLs under the newly adopted procedures.

All governments were requested to complete this form even if previous notification of acceptances had been given. The Committee urged governments and economic groupings to notify the Codex Secretariat of their acceptances or non-acceptances of Codex MRLs through this form.

47. The Committee was informed that Sweden had revised its regulations for pesticide residues in food and, as a consequence, would have to withdraw some full acceptances of Codex MRLs.

CONSIDERATION OF INTAKE OF PESTICIDE RESIDUES

(a) Progress report by WHO on Guidelines For Predicting Dietary Intake of Pesticide Residues

48. Further progress had been made in the prediction of dietary intake and this progress was discussed in the paper (CX/PR 90/7) prepared by Drs. Burin, Galal-Gorchev and Herrman from WHO.

49. The development of "global" and "cultural" diets based on FAO Food Balance Sheets was discussed in ALINORM 89/24A, paragraphs 45 and 46. A Circular Letter was sent to Codex Contact Points requesting food consumption data (CL 1989/25 PR) which could permit the development of more accurate dietary consumption estimates for individual commodities. However, information had been received from only 18 countries. While sufficient information was available for the development of a European-type diet, insufficient information was available for the development of the other 4 cultural diets based on the submitted food consumption survey data.

50. The global diet derived from FAO Food Balance Sheets was used to calculate Theoretical Maximum Daily Intakes (TMDIs) for 48 pesticides which included those evaluated at the 1989 JMPR and those identified as of concern at either the 20th or 21st Sessions of the CCPR. Fifteen of the 48 pesticides had TMDIs greater than 100 percent of the ADI. The methodology used for calculating TMDI (and EMDI) is that described in the publication "Guidelines for Predicting Dietary Intake of Pesticide Residues" (WHO, 1989).

51. Estimated Maximum Daily Intake (EMDIs) were calculated for 11 pesticides for which information was available in previous JMPR evaluations and which TMDI exceeded the ADI. For commodities which contributed a theoretical intake of 1 percent or more of the TMDI, previous JMPR residue evaluations were examined to obtain information on the amount of residue which is present in the edible portion of the commodity and after residue loss upon storage, processing and cooking. Only a limited amount of information concerning these factors was found and one or more cultural diets were found to have EMDIs which exceeded the ADI for each of the 11 pesticides.

52. It was stressed that TMDIs and EMDIs are not intended to be realistic calculations of pesticide residue intake. They are simplified calculations that are likely to represent large overestimates of intake. The "Guidelines for Predicting Dietary Intake of Pesticide Intake" recommend that calculations of Estimated Daily Intakes (EDIs) be performed at the national level. These calculations would include more precise information on food consumption at the national level, measured residue levels rather than estimated levels and reduction factors from cooking, processing and storage under conditions which are most relevant at the national level.

(b) Report on pesticide intake studies through the Joint UNEP/FAO/WHO Food Contamination Monitoring Programme (GEMS/Food)

53. The Committee had before it document CX/PR 90/8 prepared by WHO. The WHO Representative provided information collected by GEMS/Food on the dietary intake of certain organochlorine and organophosphorus pesticides. GEMS/Food is a joint UNEP, FAO, WHO project. Of a total of thirty-nine countries participating in GEMS/Food, only eight provided such information. These were Australia, Finland, Guatemala, Japan, New Zealand, Thailand, the United Kingdom and the USA. Mean intakes of organochlorine pesticides studied were all below 10 percent of the respective ADI and in most cases the intakes were less than 1 percent of the ADI. For countries reporting intakes over several years, a downward trend was noticeable.

54. In the case of organophosphorus pesticides, mean intakes reported by five countries (Guatemala, Japan, New Zealand, Thailand and the USA) were all below 1% of the respective ADI.

55. The information available to GEMS/Food was limited in scope and was insufficient to allow for a comprehensive and definite assessment of the dietary intake of pesticide residues. For organochlorine pesticides, the available information was largely from countries that have curtailed or banned altogether the use of these pesticides on agricultural crops. Additional intake data would be desirable from countries that are known to use such pesticides extensively.

56. The Committee noted the large differences between the TMDIs and EMDIs, estimated by WHO for certain organophosphorus pesticides, and actual intake measurements. It was noted that in many cases better estimates of EMDIs could not be made because information on residue levels present in the edible portion of the commodity as well as reduction factors for processing and cooking were not available in JMPR Evaluations. The Committee strongly recommended that such information be provided to JMPR to allow better estimates of the EMDI to be made.

(c) Reports on pesticide residue intake studies in various countries

57. The Netherlands had carried out investigations of dietary intake of pesticide residues through market basket and duplicate diet studies and the results would be available shortly.

58. The observer from the AOAC informed the Committee that information on dietary intake studies was regularly published in its journal. Studies carried out in the United Kingdom since 1965 also indicated a dramatic decrease in intake of pesticide residues.

59. Australia carries out dietary intake studies on an annual basis and the report of the 1987 Market Basket Survey was made available to the delegates. The actual intake of pesticide residues is generally well within the ADI; for example the actual intake of pirimiphos-methyl is less than 1 % of the ADI in contrast to a calculated intake of 200 % of the ADI.

60. The delegation of the USA provided information on the Food and Drug Administration total diet studies as contained in the report "Residues in Foods - 1988". The results of these studies, which were regularly published in the Journal of the AOAC, indicate that intakes of pesticide residues were generally less than 1 % of the ADI. In addition, the U.S. noted that intake studies, monitoring data, percentage crop treated and other information were used by the EPA to evaluate actual or anticipated human exposure to pesticide residues.

61. In about a year the results of intake studies in Sweden would probably be published.

62. The National Food Administration of Denmark had published a report on levels of contaminants and nutrients in food for the period 1983 -1987. The report would be available shortly in English. Organochlorine pesticides were no longer used in Denmark and therefore only foods of animal origin were examined for these compounds. Levels found and corresponding intake were very low.

63. During 1987 the Federal Republic of Germany had studied during 1987 the intake of seven different pesticides. Eighty-six percent of the samples contained no detectable residues of pesticides. The highest intake had been recorded for lindane and amounted to only 2% of the ADI. Fruit and vegetables were found to be the main source of such intake. A new market basket study had been conducted in 1988 and the results would be available shortly.

64. In Greece, organophosphorus pesticides were monitored in virgin olive oil, an important component of the diet. Dimethoate had not been detected in any of the 550 samples collected nationwide. For fenthion 50 % of the samples contained no detectable residue and only 5 % of the samples exceeded the Codex MRL of 1 mg/kg. During the second year of the study (1989-90) 70 samples were analyzed. The Codex MRLs exceeded the fenthion concentration in only four samples.

65. India had conducted an extensive, nationwide monitoring study of total HCH, individual HCH isomers, DDT and endosulfan in dairy milk, mothers milk, butter, peanut and cotton seed. India was still using large quantities of organochlorine pesticides and there was an urgent need to further monitor the presence of these pesticides in infant food, cereals and drinking water. The details of the study as contained in the document "Monitoring of Pesticide Residues in Indian Environment" were made available to the delegates.

66. The delegation of The Netherlands inquired about the availability of the proceedings of the symposium on monitoring dietary intake held in June 1989 in Helsinki. The Codex Secretariat would contact ILSI Europe, the organizer of the symposium, so that such proceedings could be made available to the next Session of the CCPR.

THE CODEX CLASSIFICATION OF FOODS AND ANIMAL FEEDS (CAC/PR 4-1989) (Agenda Item 8.1 (a))

67. At its 21st Session the CCPR decided that possible discrepancies between the Codex Classification document (CAC/PR 4-1989) and the document on portions of commodities (CAC/PR 6-1984) should be analyzed by the Codex Secretariat which should report its conclusions to this Committee. The result of this analysis was given in document CX/PR 90/13.

68. The Committee was informed that new groups of commodities, which had not been referred to in Part 6, were included in Part 4 of the Guide. The most important differences between Parts 4 and 6 of the Guide concerned the system of grouping the same commodities but without any change in the definition of portion of commodity to which MRLs apply. In the case of herbs and spices, the portion of the commodity to which the MRL applies had been modified, but this modification did not create any problem because no MRLs had been set by Codex for herbs and spices. For oilseed and legume oilseeds, grouped in the new classification together in the oilseed group, a discrepancy existed for the definition of the portion of commodity. It was defined as dehusked in Part 4 of the Guide while it occurred as whole commodity in Part 6.

69. The Committee decided to refer the definition of portion of commodity to which MRLs apply for the oilseed group to the Working Group on Methods of Analysis.

70. The Committee was informed that in the light of the recent edition of the Codex Classification, Part 4 of the Guide, it should not be necessary at this time to update Part 6 of the Guide. Instead, Part 4 was complete in itself and would be included in Vol. II of the Revised Codex Alimentarius, on Pesticide Residues in Foods. The delegation of the United States of America, supported by the delegation of Canada, informed the Committee that Part 6 of the Guide was very useful for a rapid identification of the portion of a commodity to which MRLs apply and proposed that Part 6 should be updated and published in Volume II of the Revised Codex Alimentarius. The Committee agreed with this view.

MRL for low fat meat products

71. The Chairman of CCPR enquired whether MRLs for low fat meat products had been successfully addressed by the classification system. The delegation of The Netherlands brought to the attention of the Committee the existence of EEC directives on the subject. In the case of meat with low fat content the MRL for the meat products is derived from the MRL of the fat.

72. The delegation of France informed the Committee that in the case of rabbit, which contains 9 to 12 % fat, the fat is often removed at the time of export and this will cause problems in international trade. The issue was clarified by reference to the Codex Classification of Foods and Animal Feeds (pg. 65) which states that in the case of rabbit meat the MRL applies to the whole commodity. Further discussion of the subject took place later during the Session and is reported in para 364 to 366.

Classification of oil

73. The delegation of Greece informed the Committee that virgin olive oil, which moves in international trade, cannot be classified under 067 vegetable oil, crude or 068 vegetable oil, edible (or refined) and requires a separate classification. The Committee was informed that an amendment in the classification had been proposed by the delegation of Greece, and would be considered by the Codex Secretariat.

CONSIDERATION OF MAXIMUM RESIDUE LIMITS (Agenda Item 8.1 (b), (c), (d), (e))

74. The Committee had before it the following documents:

- CX/PR 90/2 containing MRLs at Step 6;
- CX/PR 90/2 - Add. 1 containing MRLs returned to Step 6;
- CX/PR 90/2 - Add. 2 containing MRLs at Step 3;
- CAC/PR 2-1990, Part 2 of the "Guide to Codex Maximum Limits for Pesticide Residues" in which MRLs are listed;
- CX/PR 90/9,10 and 11 containing government comments on the MRLs under discussion.

In the interest of economy the following paragraphs refer only to those MRLs and ERLs on which there was detailed discussion, where delegations expressed reservations, or where relevant information had to be recorded. The Step in the Codex Procedure to which the Committee advanced or returned individual MRLs or ERLs or at which limits were held is indicated for each pesticide as follows:

Step	Action
5	The draft MRL is submitted to the CAC for consideration and advancement to Step 6 for comments.
5/8	The draft MRL is submitted to the CAC at Steps 5 and 8, because the CCPR has recommended the omission of Steps 6 and 7.
7A	The draft MRL is held at Step 7 only because the ADI is temporary. It is submitted by the Secretariat to the Commission at Step 8 as soon as a full ADI is estimated.
7B	The draft MRL is held at Step 7 pending further consideration by the JMPR. Immediately after such consideration it is returned to Step 6 by the Secretariat for comments by Governments.
7C	The draft MRL is held at Step 7 to await developments (other than review by the JMPR) on which further action by the CCPR is contingent. After such developments it is returned to Step 6 by the CCPR.
8	The draft MRL is submitted to the CAC for adoption as a Codex MRL ("CXL").
(a) (following Step number)	The MRL is a proposed amendment to a Codex MRL (CXL).

AZINPHOS-METHYL (002)

75. Because azinphos-ethyl had been withdrawn from the Codex system, the Committee agreed to delete it from the description of the residue.

CAPTAN (007)

Cherries; Potato

76. The Committee noted that captan was due for review by the 1990 JMPR and agreed to retain the proposals at Step 7C. Governments and manufacturers were requested to provide data.

Status of MRLs

At Step 7C: cherries, potato

DDT (021)

77. The Committee agreed that the Secretariat would request in a Circular Letter that information on current GAP and actual residue levels either based on uses or on monitoring data of DDT be sent to the JMPR.

DIMETHOATE (027)

78. The delegation of Canada had a general reservation because toxicological information was lacking. The delegation of the United States expressed its preference for a combined MRL for dimethoate and omethoate and for pome fruits supported a 2 mg/kg limit.

Wheat

79. Several delegations were of the opinion that more data on wheat were desirable, particularly data obtained using current methods of analysis.

Other commodities

80. Data on other commodities were requested to be sent to the JMPR. The delegation of Hungary had provided data on stone fruit (excluding apricot).

Status of MRLs

At Step 7B: apricot; banana; beans (except broad bean and soya bean); broccoli; Brussels sprouts; cabbages (head); cauliflower; celery; cucumber; grapes; hops (dry); lettuce (head); lettuce (leaf); peach; plums (including prunes); spinach; wheat

At Step 8: apple; pear

DIOXATHION (028)

81. The Committee agreed to delete the footnote.

ENDOSULFAN (032)

82. A new ADI had been established by the 1989 JMPR. The delegation of the Netherlands indicated that all uses had been banned in that country for environmental reasons, however, decisions regarding MRLs would not be affected by this action.

Alfalfa forage (green)

83. The delegation of the United States undertook to provide residue data on alfalfa hay to support an MRL of 0.3 mg/kg rather than the current proposal of 1 mg/kg.

Broccoli

84. The delegation of the United States preferred an MRL of 2.0 mg/kg based on extrapolation from Brussels sprouts. It was noted that additional data were needed to modify the current proposal.

Cabbage, Savoy; Cabbages, Head except Cabbage, Savoy

85. The delegation of the USA preferred an MRL of 2 mg/kg for all head cabbages, based on data in earlier JMPR Reports and US GAP. The United States should be able to supply current GAP to the JMPR.

Chard; Chicory leaves; Endive

86. JMPR Reports (1987,1989) indicate that GAP for these commodities was proposed only. As there was no information on actual GAP available during the discussion, the Committee agreed to ask for information from governments on GAP, with a view to deleting these proposals at the 23rd Session if no information was provided.

Cherries; Lettuce, head; Lettuce, leaf

87. Current MRLs in the USA are 2 mg/kg, with further data being generated to support these levels. These may be made available to the JMPR.

Common bean; Garden pea (young pods)

88. MRLs of 2 mg/kg would be required to reflect current GAP in the United States. Supporting data from the USA may be made available to the JMPR for common bean.

Kale

89. The delegation of the United States expressed the opinion that based on the data used by the JMPR, most of which was extrapolated from other leafy vegetables, the proposed MRL should be 2 mg/kg. The matter was referred back to the JMPR to review.

Meat; Milks

90. Some delegations supported the proposals while others felt that data available to the JMPR would support limits of 0.1 mg/kg in meat fat and 0.004 mg/kg in milk. New data had been requested by the JMPR for meat and milk on several occasions but had not been forthcoming. Data including monitoring data were again requested on residues in meat and milk, in addition to residues in animal feeds.

Status of MRLs

At Step 6: meat; milks
At Step 5: all other proposals

FENCHLORPHOS (036)

91. The Committee noted that the commodity "Eggs (Poultry)" was now "Eggs" in the Codex Classification of Foods and agreed that this correction would not be a substantial amendment.

FENITROTHION (037)

Wheat flour

92. Several delegations had reservations regarding the proposal, particularly because it was for a post harvest use. The delegation of Australia informed the Committee that the proposed MRL of 2 mg/kg reflected data referred to the 1989 JMPR.

Status of MRL

At Step 8: wheat flour

INORGANIC BROMIDE (047)

93. Several delegations considered the proposed MRLs to be too high in view of the current GAP.

Celery

94. The delegation of the United Kingdom, supported by the delegation of the USA, informed the Committee that data provided to the JMPR justified an MRL of 300 mg/kg. The Committee agreed to change the proposal to this level and noted reservations of the delegations of the Federal Republic of Germany, The Netherlands and France.

Lettuce head

95. The delegation of the United Kingdom expressed their reservation on the proposal of the JMPR and would provide data to support 500 mg/kg. The delegation of the United States of America informed the Committee that national GAP supported a limit of 300 mg/kg. The Committee decided to wait for data provided by the United Kingdom to the JMPR.

Status of MRLs

At Step 6 : celery
At Step 7B: lettuce, head
At Step 8 : cabbages, head; cucumber; tomato

OMETHOATE (055)

96. The delegation of the Federal Republic of Germany informed the Committee that data on apple, grapes, pear and tomato would be made available to the 1990 JMPR by the manufacturer. The Committee stressed the need for further data on residues, especially for stone fruits.

Status of MRLs

At Step 7B: apple; apricot; cherries; grapes; peach; pear; plums (including prunes); sugar beet leaves or tops; witloof chicory (sprouts)
At Step 8 : artichoke, Globe; hops, dry.

ORTHO-PHENYLPHENOL (056)

97. The Committee noted that ortho-phenylphenol would be reviewed by the 1990 JMPR for both toxicology and residue evaluation.

Melons, except Watermelon (edible portion)

98. The Committee decided that if no further information becomes available on registered uses it would consider deletion of the MRL at the next Session.

PARAQUAT (057)

99. As the ADI referred to paraquat dichloride the Committee decided to delete footnote 1. As a result footnote 2 would have to be reworded.

Soya bean (dry), MRL 0.2 mg/kg

100. The delegation of the USA informed the Committee that the manufacturer's representative was expecting U.S. GAP. There was now a registered use in Brazil for which 0.2 mg/kg seemed to be an adequate level, but this needed to be confirmed.

Status of MRLs

At Step 6: Soya bean (dry)

CYHEXATIN (067)

101. The Committee noted that cyhexatin was scheduled for evaluation by the 1991 JMPR. In view of changes in use patterns countries were urgently requested to forward data on current GAP.

Status of MRLs

At Step 7B: common bean; kiwifruit; peach; plums (including prunes), strawberry

CARBENDAZIM (072)

102. Residues will be reviewed by the 1990 JMPR. Several delegations expressed reservations regarding residues of 5 mg/kg and higher in fruits and vegetables for toxicological reasons. The delegation of Austria opposed levels greater than 10 mg/kg in foods. Post harvest uses of carbendazim had been prohibited in Poland and were under review in the United Kingdom. The delegation of France questioned the large discrepancies between post harvest MRLs, e.g. plums at 2 and pineapples at 20 mg/kg. The delegation of Canada indicated that the manufacturer had withdrawn post harvest uses of benomyl in a number of countries. Manufacturers of carbendazim, thiophanate-methyl and benomyl and countries were requested to supply GAP data to the JMPR, particularly for post harvest uses.

Apricot, Bean fodder, Cherries, Citrus fruits

103. The delegation of the Netherlands expressed the opinion that the MRLs proposed were too high on the basis of the data in the Evaluations. The matter was referred to the JMPR for review.

Berries and other small fruits

104. The delegation of Hungary proposed 2 mg/kg based on data from Hungary. The matter was referred to the JMPR for review.

Carrot

105. The MRL covering post harvest use was referred to the JMPR as it appeared to be based on old GAP covering use of thiophanate-methyl.

Cereal grains

106. The representative of the EEC indicated that the Community would be unable to accept levels exceeding 0.1 mg/kg (excluding rice) due to toxicological concerns. The 1989 CCPR had requested to the JMPR to replace the group MRL with individual MRLs on the basis of data to be forwarded.

Lettuce, head

107. The delegations of Hungary, the Netherlands and France could not accept the proposal due to uncertainties with regard to current GAP. Countries were requested to provide actual use information to the JMPR.

Mango

108. The Secretariat was requested to determine whether the MRL for mango is post harvest, the same as for melons, except watermelons.

Mushrooms

109. The delegation of the Netherlands expressed reservations regarding the proposed MRL which it thought could be lower. Recent data which should support an MRL of 2 mg/kg would be provided to the JMPR by the delegation of France.

Nectarine, Peach

110. The delegation of The Netherlands questioned the reason for the difference in MRLs in these two commodities, and indicated support for 2 mg/kg for both.

Peppers

111. The delegation of Hungary preferred an MRL of 2 based on GAP, and the delegation of the Netherlands 3 mg/kg based on GAP. The delegation of France expressed opposition to this MRL.

Pineapple

112. Because of questions regarding GAP on pineapple, the matter was referred back to the JMPR.

Potato

113. The delegations of Sweden and Finland opposed the 3 mg/kg MRL and indicated that the Joint Nordic recommendation was 0.1 mg/kg.

Rape seed

114. The delegation of the United Kingdom indicated that there could be some difficulty in enforcing a limit of 0.05 mg/kg and suggested 0.1 mg/kg as a more realistic limit. The Committee accepted the advice of the Working Group on Methods of Analysis that 0.1 was more practical and changed the proposal accordingly.

Tomato

115. The delegation of Hungary questioned the GAP used to propose the MRL of 5 mg/kg as GAP in that country required only 2 mg/kg. The matter was referred to the JMPR.

Status of MRLs

At Step 7B: apricot; bean fodder; berries and other small fruits; carrot; cereal grains; cherries; citrus fruits; lettuce, head; mushrooms; nectarine, peach; peppers; pineapples; plums (including prunes); pome fruits; sugar beet leaves or tops; tomato;

At Step 8 : all other proposals

DEMETON-S-METHYL (073), DEMETON-S-METHYLSULPHON (164), OXYDEMETON-METHYL (166)

116. In view of the low ADI estimated by the JMPR in 1989, a number of countries expressed their concern about the level(s) at which MRLs were proposed. As no information on current use patterns was available, the Committee issued an urgent request to provide the JMPR with updated information for re-evaluation in 1992. The manufacturer's representative informed the Committee that limited information was available and that further studies were in progress.

117. The delegation of Sweden questioned whether a correct calculation of the TMDI for this compound had been made. The Representative of WHO confirmed that the reported value was a result of a miscalculation and it would be corrected.

118. The delegation of The Netherlands expressed their reservation against the residue definition of the compound; they preferred an expression as the corresponding sulphone.

Status of MRLs

At Step 5: all proposals

THIOPHANATE-METHYL (077)

119. The Committee was informed that the compound was scheduled for re-evaluation by the 1990 JMPR in combination with carbendazim and benomyl. Deletion of all CXLs for this compound separately had been proposed, which would influence some of the MRLs (e.g. celery, cherries, grapes), for which the corresponding MRL for carbendazim was lower.

VAMIDOTHION (078)

120. The Committee noted that the compound was on the agenda of the JMPR for 1990. The manufacturer's representative announced that residue studies were in progress, but doubted whether data could be submitted for evaluation in 1990.

Status of MRLs

At Step 7B: cereal grains; grapes; pome fruits; rice, husked

CHLOROTHALONIL (081)

121. The Committee noted that chlorothalonil was on the agenda of the JMPR in 1990, both for toxicological and for residue evaluation. Governments were urgently requested to submit data. The delegation of France informed the Committee they had been unable to provide data on grapes for the 1990 evaluation because of difficulties encountered in the studies. The data would be submitted soon, however.

Status of MRLs

At Step 7A: bananas, cereal grains
At Step 7B: grapes

DICLORAN (083)

Onion bulb

122. Several delegations expressed reservations concerning this compound use because the relevant toxicological studies were more than 20 years old. Data were expected for re-evaluation by the 1994 JMPR. The delegations of Australia and the United States reported actual registered uses on onions. The delegation of the United States was invited to provide data to the JMPR if they became available.

Status of MRLs

At Step 7B: onion, bulb
At Step 8: witloof chicory (sprouts)

PIRIMIPHOS-METHYL (086)

Peanut oil, edible

123. The Committee was informed of post harvest uses on peanuts in several African countries. Several delegations noted that more data on the fate of the residue during different modes of processing were desirable. They were of the opinion that the MRL of 15 mg/kg was too high. The delegation of the U.K. suggested that the Committee awaited information on practices in African countries. The Committee agreed to return the proposal to Step 6 at 10 mg/kg. The footnote 2/ can be deleted for milks.

Status of MRLs

At Step 6: peanut oil, edible

DINOCAP (087)

124. The Committee noted that dinocap was on the agenda of the 1991 JMPR for residue evaluation as the proposals were from 1974 and of temporary nature. The delegation of the Netherlands expressed a reservation with regard to the proposed figure of 0.1 mg/kg for apples and informed the Committee that data on apples were available and would be sent to the JMPR.

Status of MRLs

At Step 5: all proposals

CHLORPYRIFOS-METHYL (090)

125. The Committee noted that all the MRLs had been adopted by the Commission. It was agreed to delete the footnote 1) for Lettuce, Head: "Based on outdoor data" since it was considered irrelevant. The delegation of Spain agreed to provide new residue data for lettuce and tomato reflecting current GAP in that country, for evaluation by the 1990 JMPR.

METHOMYL (094)

126. The delegation of Egypt drew the attention of the Committee to the fact that since the same residues methomyl and methomyl oxime result from the use of either methomyl or thiodicarb, it is virtually impossible to identify the parent compound used from the nature of residue. The Committee hence decided to combine the MRLs

arising from the use of methomyl and thiodicarb into a single list. The Committee noted a possible problem for countries that had separate lists of MRLs for these compounds and possibly for other sets of compounds (e.g. cyhexatin and azocyclotin). It was agreed that designating the parent compound(s) on which the MRL was based would assist those countries, and the Secretary was requested to insert designation in the lists of MRLs where appropriate.

127. The Committee drew the attention of the Working Group on Methods of Analysis to the fact that there was only one published method for thiodicarb.

Barley and barley straw and fodder (dry)

128. The delegation of the USA informed the Committee that it had provided data to the JMPR to support a level of 1.0 for barley. The Committee noted that the data provided by the delegation of the USA had not been considered by the JMPR at the 1989 Session and agreed to refer the matter to the JMPR for its reconsideration.

Cabbages, Head

129. The delegation of the Netherlands informed the Committee that the data presented in the 1975 and 1976 JMPR Evaluations would result in proposals of lower MRLs. The data showed that only when preharvest interval was as short as one day might higher residues arise. In the view of the delegation of the Netherlands an MRL of 2 mg/kg would suffice. The Committee noted that Hungarian GAP supported an MRL of 1 mg/kg. The delegation of the USA informed the Committee that U.S. GAP with preharvest interval of only one day supports an MRL of 5. The Committee noted that Canada also had a national tolerance of 5 mg/kg.

Celery

130. The delegation of France questioned the action of the 1989 JMPR to propose an increase in the MRL from 0.2, proposed by the 1988 JMPR, to 2 without convincing justification. The Committee was informed that the 1975 JMPR which reviewed the original data from the USA proposed an MRL of 3 and that the MRL of 0.2 proposed by the 1988 JMPR was a mistake where some data had been inadvertently omitted in the document. This mistake was later rectified by the 1989 JMPR which proposed an MRL of 2.

Citrus fruits

131. The Committee noted that the 1988 JMPR proposed lowering of the MRL from 2 mg/kg to 1 mg/kg. The delegation of the USA supported an MRL of 2 mg/kg based on GAP in that country, which provided for 5 applications. The Committee noted that the JMPR evaluation was based on one application. There were new data to be reviewed in the USA that might result in different GAP. The delegation of the USA undertook to have the data submitted to the JMPR after the review.

Grapes

132. The Committee noted that the uses for grapes were significantly different in different countries. The delegation of Hungary informed the Committee that GAP in their country which provided a 10 day preharvest interval (PHI) supported an MRL of 1-2 mg/kg. The delegation of France was of the opinion that a limit of 1 mg/kg was adequate. United States GAP which provides a PHI of 1 day supported an MRL of 5 mg/kg. The Committee noted that the national tolerance in Austria where the PHI is 21 days, was 0.2 mg/kg. The Committee noted that the wide divergence in GAP of

different countries could be due to the fact that the MRL referred to both table grapes and wine grapes and agreed to request more comments from governments on the subject.

Hops, dry

133. The delegation of the USA supported a 12 mg/kg limit based on FRG data and GAP submitted to the JMPR. The delegation of the Federal Republic of Germany informed the Committee that it would provide new data for a re-evaluation. The Committee was informed that the earlier use pattern in the FRG (38 litres/hectare) had changed significantly. The Committee agreed to await future evaluation by JMPR.

Lettuce, Head

134. The delegation of the Netherlands informed the Committee that GAP providing a 10 day PHI would support an MRL of 2 mg/kg. In France, where the same GAP (7 days PHI) as in the USA prevailed, the national tolerance was 2 mg/kg compared to that of 5 mg/kg in the USA. The Committee noted that such significant differences could be due to differences in climatic conditions. In Hungary where the PHI is 14 days, the national tolerance is lower than 1 mg/kg.

Nectarines

135. The Committee noted that the proposed MRL was based on old data and that no new data were available either from the countries or the manufacturer. While the MRL was supported by the delegation of the USA, the delegation of the Netherlands expressed a reservation.

Oats and oat straw and fodder, dry, Wheat and Wheat straw and fodder

136. The Committee agreed to consider these commodities in the same way as barley and barley straw.

Peach

137. As the data base used was unsatisfactory, the delegation of the Netherlands informed the Committee that more data was desired to facilitate acceptance of the proposals and expressed its reservation.

Pome fruit

138. The delegation of the Federal Republic of Germany expressed a reservation for toxicological reasons. The GAP in the FRG which provides a PHI of 14 days supported an MRL of 1 mg/kg. The national tolerances in Austria where GAP provides a PHI of 21 days and in France where GAP provides a PHI of 7 days were 0.2 and 0.1 mg/kg respectively. The delegation of the USA informed the Committee that it supported the establishment of tolerances higher than 2 mg/kg based on data provided to JMPR. Additional data were required in the U.S.A. The delegation of Spain could support an MRL of 2 mg/kg.

Tomato

139. The Committee recalled its decision to combine MRLs for methomyl and thiodicarb into a single list. It noted that tomato already had a CXL of 1.0 mg/kg. The Committee requested that the Secretary note the possible redundancies in compiling the lists of combined MRLs.

Status of MRLs

At Step 6: grapes

At Step 7B: barley, barley straw and fodder (dry); hops, dry; oats and oat fodder dry; wheat; wheat straw and fodder, dry

At Step 8: cabbages, head; celery; citrus fruits; lettuce, head; nectarines; peach; pome fruit; tomato

ACEPHATE (095)

Broccoli; Brussels sprouts; Cabbages, head; Cauliflower; Citrus fruits; Tomato

140. The Committee noted that acephate would be reviewed by the 1990 JMPR. The observer from GIFAP informed the Committee that the manufacturer had already made available new data on tomato and citrus. The delegations of France and Italy agreed to either provide new data or inform the FAO Secretariat of the JMPR about the current situation in their country.

Status of MRLs

At Step 7B: broccoli; Brussels sprouts; cabbages, head; cauliflower; citrus fruits and tomato

METHAMIDOPHOS (100)

141. The Committee noted that methamidophos was on the agenda of the 1990 JMPR for both toxicology and residue evaluation. The manufacturer agreed to provide additional residue and toxicological data to the JMPR. The delegation of the Federal Republic of Germany informed the Committee that it had already submitted additional GAP and residue data. The Committee expressed the view that information on reduction factors for cooking and processing would be extremely useful and requested countries to provide any such information available to them.

Status of MRLs

At Step 7B: broccoli; Brussels sprouts; cabbages, head; cauliflower; celery; citrus fruits; cotton seed; cucumber; egg plant; lettuce, head; peach; peppers; potato; soya bean (dry); sugarbeet; sugarbeet leaves or tops; and tomato

At Step 8: hops, dry

DAMINOZIDE (104)

142. The Committee noted that a full ADI for daminozide had been established by the 1989 JMPR which was applicable to daminozide containing up to 30 mg/kg of UDMH. Daminozide would again be reviewed by the JMPR in 1991.

Residue Definition

143. The delegation of the Federal Republic of Germany, supported by the delegation of Canada and representative of the EEC and Canada, indicated that it was not possible to agree to the residue definition as the sum of daminozide and UDMH as this would theoretically allow up to 5 mg/kg of UDMH on apples and pears. The representative of the AOAC indicated that the analytical procedure used to date converted daminozide to UDMH. In addition, the levels of UDMH in raw commodities were low. There was appreciable conversion of daminozide to UDMH in processed foods, but the MRLs were not really applicable to processed foods.

Regulatory Status of Daminozide in Various Countries

144. The following countries had withdrawn use for toxicological reasons: France, Belgium, Chile, United States, Federal Republic of Germany (MRLs still valid). Sweden's position was reserved until the JMPR Reports could be studied.

145. In Portugal, the United Kingdom and in Canada, daminozide was still registered but not used. In the U.K. complete toxicological data, including data for UDMH, would need to be evaluated before a new registration could be obtained or the existing registration maintained. In Canada complete toxicological data including data for UDMH would be evaluated to update the position with respect to the ADI and MRLs. In the Netherlands, daminozide was still registered and, although no longer allowed by the Commodity Board for Fruits and Vegetables, (a public authority), was now being used with a special derogation. Fruit treated with daminozide must be so labelled. It is currently also allowed in Hungary with an MRL of 5 mg/kg.

146. The representative of the EEC indicated that the Scientific Committee for Pesticides had evaluated the toxicological data for both daminozide and UDMH. Neither had been found to be genotoxic and NOELs had been established for carcinogenicity for both compounds. However an ADI could not be established without metabolic studies in vivo to clarify the fate of daminozide and the rate of production of UDMH. In addition data on the levels of UDMH after processing and cooking of commodities for which MRLs were proposed would be necessary before MRLs could be established. In the meantime the EEC recommended that the MRLs not be advanced beyond Step 3.

147. The delegation of Chile informed the Committee that, even though daminozide had not been used in that country for one year, residues of less than 0.5 mg/kg were still being found.

148. The delegation of the United States informed the Committee that tolerances had been revoked in raw and processed tomatoes, milk, meat, peanut meal, eggs and meat products. For apples and processed apple products the MRL had been lowered from 20 to 5 mg/kg until November 30, 1990, at which time the tolerance would be lowered to 1 mg/kg until May 31, 1991. After May 31, 1991, all residues would be illegal, including residues on apples, cherries, nectarines, peaches, pears, peanuts and grapes. This would include any detectable residues on raw or processed foods or feeds.

Status of MRLs

At Step 5: apples; pears

DITHIOCARBAMATES (105)

149. Dithiocarbamates (with the exception of thiram) were on the agenda of the 1993 JMPR for both toxicology and residue evaluation. Thiram was on the agenda of the 1992 JMPR for toxicology and residue evaluation. Data including residues and GAP should be sent to the JMPR for reconsideration because the limits (except that for lettuce, head) were considered to be temporary by the JMPR, pending the receipt of additional data. The delegation of the USA informed the Committee that mancozeb, maneb, metiram, zineb and nabam were under special re-evaluation in the USA and that some cancelled uses and lower tolerances could be expected.

ETHYLENETHIOUREA (ETU) (108)

150. New toxicological data would be supplied to the JMPR for 1993. It was on the agenda of the 1990 JMPR for residue evaluation.

151. For most commodities MRLs had been estimated when the limit of determination was higher than actually considered practical. All proposals would remain at Step 7B awaiting new information. Delegations were requested to forward new residue data obtained with current methods of analysis to the JMPR.

Common bean

152. The Committee agreed to delete the proposal for common bean at its next Session if no new data were supplied.

Status of MRLs

At Step 7B: all proposals

IMAZALIL (110)

153. The Committee noted that imazalil was on the agenda of the 1991 JMPR for toxicological and residue evaluation.

Potato

154. It was confirmed that imazalil was registered in The Netherlands and Belgium for the use on potatoes for human consumption. Some delegations expressed reservations on this use.

Status of MRLs

At Step 8: potato

PHORATE (112)

155. Phorate was on the agenda of the 1990 JMPR for residue evaluation and data had been received by the Joint Secretariat. Delegations were requested to supply any information to the Joint Secretariat which would make it possible to establish reduction factors for use in intake estimations.

Milks

156. The Ad Hoc Working Group on Methods of Analysis was of the opinion that a limit of determination of 0.05 (*) mg/kg for milk was achievable in regulatory analysis. The proposal was returned to Step 6.

Status of MRLs

At Step 6: milks
At Step 7B: carrot; maize fodder; peanut; potato; sugar beet; sugar beet leaves or tops

TECNAZENE (115)

157. The manufacturer's representative indicated that new data on residues and metabolites would be submitted to the 1991 JMPR and that new toxicological data

including metabolites would be supplied to the 1993 JMPR. The delegation of the United Kingdom informed the Committee that their country had considered preliminary new toxicological data and had concluded that ADI could be increased to 0.03 mg/kg. Further toxicological data was awaited from the manufacturer. Consideration should be given to including metabolites within the definition of tecnazene.

Potato

158. Several delegations expressed a reservation against increasing the MRL for washed potatoes from 1 to 10 mg/kg. The delegation of the USA stated that data supported 15 mg/kg.

Status of MRLs

At Step 5: potato

ALDICARB (117)

159. The Committee noted that aldicarb was on the agenda of the 1990 JMPR for residue evaluation. Portugal had submitted data on citrus fruits. Other countries were invited to submit data to the JMPR.

Status of MRLs

At Step 7B: citrus fruits

CYPERMETHRIN (118)

160. The Committee noted that the compound was on the agenda of the 1990 JMPR for residue evaluation and was informed that the manufacturer had made available data to be considered by the JMPR. The delegations were also invited to submit data.

Status of MRLs

At Step 7B: berries and other small fruits

FENVALERATE (119)

161. Delegations were asked to provide data on GAP to the 1990 JMPR.

Status of MRLs

At Step 7B: Brussels sprouts

PERMETHRIN (120)

162. The delegation of Australia informed the Committee that the promised data on cereals for evaluation in 1990 could only be provided to the JMPR 1991. The Committee requested postponement of the review of this compound to 1991.

Status of MRLs

At Step 7B: bran, unprocessed; wheat flour; wheat wholemeal

AMITRAZ (122)

163. The Committee agreed with the residue definition as rephrased by the 1989 JMPR as a non-substantial amendment. The delegation of the Netherlands informed the Committee that the national MRL for tomatoes reported in the 1989 JMPR Evaluations should read 0.2 instead of 0.4 mg/kg.

164. The delegations of the USA and Canada stated that the determination of the total residue together with the use of a conversion factor was the basis for calculating the residue content of tomatoes and should be used for other commodities, if acceptable for tomato. The delegation of the USA questioned basing the tomato limit on average residues. Although the delegation of France was not against such an approach for tomatoes, they were cautious about using such an approach as a general rule. The delegation of Canada expressed concern about the use of amitraz as they had not been able to establish an ADI following consideration of toxicological data which had not been available to the JMPR. They agreed to contact the registrant and encourage them to provide these data to the 1990 JMPR. The Committee referred these issues to the JMPR for review.

Status of MRLs

At Step 5: tomato

ETRIMFOS (123)

Apple

165. Several delegations considered the MRL too high in view of the ADI. The 1 mg/kg proposal reflected GAP in Portugal and the Federal Republic of Germany.

Barley; Maize; Wheat bran; Wheat flour; Wheat wholemeal

166. Several countries took the position in 1989 and again this year that the post harvest uses on cereals were not acceptable due to the low ADI. The delegation of the United Kingdom indicated that an MRL of 10 mg/kg exists in that country, but that it may be lowered to 5 mg/kg. The delegation of Hungary supported the need for an MRL of 5 mg/kg. In view of the controversy surrounding the use of certain grain protectants, the Committee requested that a paper be prepared on the subject of grain protectants in general, to be discussed at the 1991 Session. The delegation of Australia offered to prepare such a paper.

Grapes

167. The 1989 CCPR had considered the MRL too high and countries had been requested to provide further residues and GAP data on both grapes and wine to the JMPR. Etrimfos is used in Spain with an MRL of 0.1 mg/kg and in Switzerland with an MRL of 0.2 mg/kg. Other countries present indicated that it was not being used on grapes. The request for residues and GAP data for grapes and wine was repeated.

Lettuce, head

168. The delegation of the Federal Republic of Germany indicated that this MRL had been proposed based on GAP from that country. Any new data regarding this proposal would be supplied to the JMPR.

Status of MRLs

At Step 7B: grapes; lettuce, head
At Step 8 : all other proposals

METHACRIFOS (125)

169. The Committee noted that the compound was on the agenda of the 1990 JMPR for toxicological and residue evaluation. Data on GAP were requested to be submitted to the JMPR. The delegation of Australia announced that data on milling/processing studies for wheat were underway, but could not be made available before 1991. The manufacturer's representative confirmed that data on both toxicological and residue studies had been submitted to the JMPR.

Status of MRLs

At Step 7B: all proposals

PHENOTHRIN (127)

170. The delegation of France questioned how a registered use rate of 1 mg/kg on wheat would result in higher residues in wheat and in several wheat products. The delegation of Australia pointed out that the limits were based on data evaluated by the JMPR in 1988, and that the difference probably could be attributed to errors involved in sampling and/or analysis of the samples.

Status of MRLs

At Step 8: all proposals

AZOCYCLOTIN (129)

171. The Committee noted that azocyclotin, together with cyhexatin, was on the agenda of the 1991 JMPR for both toxicological and residue evaluation. In the case registered uses had changed, delegates were requested to submit current use pattern data to the JMPR.

172. The delegation of the Federal Republic of Germany corrected a statement in their written comments: no further residue data would be submitted to the JMPR.

173. The delegation of the United Kingdom drew the attention to a mistake in their written comments: the delegation supported a limit of 2 mg/kg for pome fruit.

Status of MRLs

At Step 7B: all proposals

TRIADIMEFON (133)

174. It was noted by the Committee that the compound was closely related to triadimenol. Delegations were of different opinion as to whether to consider the residue as a sum of triadimefon and triadimenol or to use separate limits for these substances. The Committee was informed about the principle set out in the Report of the 1989 JMPR (para 2.10) that, whenever possible, separate MRLs should be established for a parent pesticide and its metabolite that is also registered for

use as a pesticide. The JMPR specifically mentioned triadimenol/triadimefon as an example. The AOAC confirmed that these compounds could be quantitated separately. Triadimefon had been scheduled for the JMPR 1991 for evaluation of the residues.

Status of MRLs

At Step 7B: all proposals

DELTAMETHRIN (135)

175. The compound was scheduled for the 1990 JMPR for evaluation of the residue.

Beans (dry)

176. The representative of the manufacturer informed the Committee about marginal utilization of deltamethrin for treatment of beans by North-African countries. The residues after cooking are much lower than the MRL for beans (dry).

Milks

177. The delegation of the Netherlands was of the opinion that the proposed limit for milks was too low in the light of the use of the compound in veterinary practice. This was confirmed by the manufacturer.

Wheat bran, unprocessed; Wheat flour; Wheat wholemeal

178. The representative of the manufacturer promised to provide data for the JMPR 1991 on wheat processed products.

Oilseed except peanut; Peanut

179. The delegation of the United States stated that there are no US tolerances.

Status of MRLs

At Step 5/8:	oilseed except peanut; peanut
At Step 7B:	milks; wheat bran, unprocessed; wheat flour; wheat wholemeal
At Step 8:	beans (dry); field pea (dry); lentil (dry)

PROCYMIDONE (136)

Apple; Cherries; Currants, black, red, white; Nectarine; Peach; Raspberries, red, black; Strawberry; Tomato

180. Several delegations expressed reservations with respect to these proposals as they had not been supported by adequate GAP and residues data. The manufacturer informed the Committee that all available data in this respect had been provided to the 1989 JMPR. The delegation of Egypt indicated that new residue data on strawberries could be supplied to the JMPR. The delegation of Austria indicated that several MRLs at lower levels had been established in that country and that residue data may be available. GAP in Australia and the Federal Republic of Germany supported the current proposals for stone fruits and raspberry respectively.

Grapes

181. The delegation of the Netherlands reserved its position as more data were needed to study the carry-over of residues into wine and grape juice. The

delegation of France informed the Committee that such data were now available and would be supplied for the 1990 JMPR. The data indicated that 5 mg/kg of procymidone in the grapes resulted in less than 1 mg/kg in the wine and in fact 95% of the 300-400 samples monitored recently showed less than 0.05 mg/kg in wine.

182. The Committee decided to discuss the advisability of establishing an MRL for wine in the general context of MRLs for processed foods. (para 364, 365 and 366).

Status of MRLs

At Step 5: all proposals

BENDIOCARB (137)

183. The Committee noted that the 1989 JMPR had proposed withdrawal of several Codex MRLs such as for pome fruits, barley, oats and wheat considering that bendiocarb uses are not expected on these commodities. The Committee decided to postpone the withdrawal to the next Session, expecting comments on the JMPR proposal.

Status of MRLs

At Step 5/8: beetroot

METALAXYL (138)

184. The Committee noted that the compound was on the agenda of the 1990 JMPR for residue evaluation and the manufacturer's representative promised that new residue data would be made available on cucurbits and other commodities to the JMPR for 1990.

185. The delegations of the United States of America and Canada repeated their opinion that the definition of the residue should include metabolites.

Cacao beans; Brassica; (Cucurbits; Melons, Watermelons)

186. The Committee was informed by the delegation of the United States of America that new data would be provided for the 1990 JMPR.

Lettuce, head; Spinach

187. The Committee was informed that the proposal of 2 mg/kg was retained by the CCPR in 1988 and 1989 at Step 7B expecting additional data but no additional information had been received. The Committee decided to designate the MRLs as temporary at Step 7B, expecting new data from the manufacturer.

Onion

188. The delegation of the Netherlands indicated they could not accept the current proposal which was based on extrapolation from total metalaxyl residue assuming no difference from residues as metalaxyl per se. The meeting was informed that additional data had been provided by the 1990 JMPR.

Strawberry

189. The delegation of France expressed a reservation on the proposal for strawberry. The delegation of Spain would provide data on strawberry to support an MRL of 0.5 mg/kg.

Status of MRLs

At Step 7B: broccoli; Brussels sprouts; cabbages, head; cacao beans; cauliflower; lettuce, head; onion, bulb; spinach; strawberry

At Step 8: carrot; cucumber; raspberries, red, black; gherkins

PROCHLORAZ (142)

190. The Committee was informed by the manufacturer's representative that new data would be available for the 1990 JMPR.

Status of MRLs

At Step 7B: cattle, edible offal of; cattle fat; cattle meat; citrus fruits; milks; papaya; stone fruits

TRIAZOPHOS (143)

191. Triazophos was on the agenda of the 1990 JMPR for residue evaluation and on the agenda of the 1991 JMPR for toxicological evaluation. The CCPR at its 18th Session had considered that 0.01 mg/kg was a realistic limit of determination. The Committee agreed that the JMPR should review this.

Status of MRLs

At Step 7B: all proposals

BITERTANOL (144)

192. The Committee noted that an analytical method for animal products would soon be available.

Bean forage (green); Peanut forage (green)

193. The delegation of the Netherlands would prefer that the limits for these animal feed products be expressed on a dry weight basis in order to accommodate the often large variation in moisture content of such commodities. They were aware that the data available to the JMPR did not permit expression of limits on a dry weight basis. Delegations therefore were invited to supply data on a dry weight basis to the JMPR.

Pome fruit

194. The delegation of the United Kingdom could not support an MRL of more than 1 mg/kg because of toxicological concerns regarding residues in apples. The delegations of the Federal Republic of Germany and Poland stated that they needed 2 mg/kg.

Stone fruit

195. The delegation of The Netherlands would prefer to replace the group limit by limits for specific commodities. Based on the data available to the 1988 JMPR with regard to GAP in various countries and available data on residues from supervised trials on apricots, nectarines and peaches, specific limits of either 1 or 0.5 mg/kg for the latter commodities could be estimated. The Joint Secretariat confirmed that this could be placed on the agenda of the 1991 JMPR.

Status of MRLs

At Step 7B: stone fruits (except cherries and plums)
At Step 8: all other proposals

CARBOSULFAN (145)

196. The Committee noted that the temporary MRL for citrus fruits was awaiting re-evaluation by the 1991 JMPR on basis of information to be provided by the manufacturer.

Status of MRLs

At Step 7B: citrus fruits

METHOPRENE (147)

197. The Committee noted that the compound was on the agenda of the 1990 JMPR for residue evaluation.

Edible offal (mammalian); Eggs; Meat

198. The feeding of treated feed to animals in order to control flies in manure was not considered GAP in the Netherlands, especially when this gives rise to residues. The delegation acknowledged however, that residues also can be caused by feeding treated grains.

Status of MRLs

At Step 8: all proposals

FLUCYTHRINATE (152)

Cattle meat; Cattle milk; Eggs; Goat meat

199. The Committee noted that the compound had to be reviewed by the JMPR in view of the temporary limits for these commodities. Data were available for the 1990 JMPR for residue evaluation.

Maize fodder

200. The registration had been voluntarily withdrawn in the USA by the manufacturer for commercial reasons, but it was still registered in Spain. All delegations, in particular several other countries, were invited to submit data to the 1990 JMPR.

Status of MRLs

At Step 7B: cattle meat; cattle milk; eggs; goat meat; maize fodder; maize forage
At Step 8: cabbages, head

THIODICARB (154)

201. Reference was made to methomyl (094), where it was decided to combine both compounds into a single list. The Committee decided that entries related to thiodicarb would be deleted when the MRLs for methomyl reach Step 8.

BENALAXYL (155)

202. It was noted that the compound was on the agenda of the 1992 JMPR for residue evaluation. The Committee was informed that no suitable methods of analysis were available in the open literature.

203. The delegation of Canada drew attention to the different metabolites present in plants, animals and soil and the request for additional information made by the 1986 JMPR. The representative of GIFAP informed the Committee that additional studies had been started this year and would be available in two years time for evaluation by the JMPR.

Grapes

204. The delegations of the Federal Republic of Germany and The Netherlands stated that the MRL for grapes could be reduced to 0.2 mg/kg, based on existing GAP, as the product was not registered in the Federal Republic of Germany. The delegation of France, in noting that residues were generally about 0.1 mg/kg, supported the delegations of the Federal Republic of Germany and the Netherlands. mentioned an MRL of 0.1 mg/kg. The Committee agreed on a change in the MRL from 0.5 mg/kg to 0.2 mg/kg.

Potato

205. The delegation of The Netherlands had some doubt whether the limit of determination of 0.01 mg/kg was suitable for regulatory purposes. The Working Group on Methods of Analysis had noted that there was no suitable analytical method published in the open literature and was therefore unable to reach a conclusion on a limit of determination.

Status of MRLs

At Step 6: grapes
At Step 8: hops, dry; peppers, sweet; potato; tomato

CLOFENTEZINE (156)

206. The delegation of the USA had reservations with regard to the expression of the residue based on the parent compound.

Citrus fruits; Currants, black, red, white

207. The Committee noted that the compound would be reviewed by the 1990 JMPR in view of the temporary limit for citrus fruits and use pattern for currants, black, red, white.

Grapes

208. The delegation of France reserved its position and asked for new data on GAP as well as processing data. The delegation of The Netherlands stated that the proposed limit seemed too high and suggested that 0.1 mg/kg was sufficient. The delegation of Hungary could accept the limit of 0.2 mg/kg. The delegation of the Federal Republic of Germany, would ask the manufacturer to submit data to the 1990 JMPR.

Status of MRLs

At Step 7B: citrus fruits; currants, black, red, white; grapes
At Step 8: cucumber

CYFLUTHRIN (157)

209. The Committee noted that all limits were temporary because the available database was considered by the 1989 JMPR to be insufficient to propose full MRLs. The manufacturer's representative announced that studies were in progress to provide additional residue data as required by the JMPR for re-evaluation of the compound in 1992. These data might also enable the JMPR to establish MRLs for other commodities as well.

Cattle milk

210. The vice-chairman of JMPR 1989 informed the Committee that the reported value should read 0.005 mg/kg F instead of 0.1 mg/kg F. The latter seemed to be an error in the 1989 Evaluations. The Committee decided to adopt the proposed change and to ask the JMPR for further clarification.

Cotton seed

211. The manufacturer's representative announced that additional data which had been generated to support revised US-GAP could be made available to the 1992 JMPR.

Peppers, sweet

212. The delegation of the USA noted that the 0.2 mg/kg proposal was based on application rates of only one half of that recorded as the maximum GAP rate, although from more than the permitted number of applications.

Status of MRLs

At Step 5: all proposals

GLYPHOSATE (158)

213. The Committee noted the reservation of the delegation of the USA on the definition of the residue.

Wheat bran, unprocessed; wheat flour; wheat wholemeal

214. The delegation of Finland expressed its reservation regarding proposed MRLs resulting from near- or at-harvest use which leads to unnecessarily high residues in basic foods.

215. The delegation of the Federal Republic of Germany considered the proposed value for wheat bran too high in relation to the 5 mg/kg CXL for wheat. Moreover, the value was based on analytical data which were corrected for recovery, a procedure which was not recommended by the Ad-Hoc Working Group on Methods of Analysis in the reporting on residue trials. This matter was also discussed by this Working Group (see para 321). However, low and variable recoveries due need to be taken into account in the estimation of MRLs. The Committee decided to return the proposal to Step 6.

216. The delegation of the Federal Republic of Germany considered the proposed limit for wheat flour as probably too low. The delegation of Australia made clear that the proposed limit was based on processing studies resulting in residues in the flour which were all below 0.5 mg/kg.

Status of MRLs

At Step 6:	wheat bran, unprocessed
At Step 8:	soya bean (dry); soya bean fodder; soya bean forage (green); wheat flour; wheat wholemeal

VINCLOZOLIN (159)

217. The Committee noted that the compound was on the agenda of the 1990 JMPR for residue evaluation. The manufacturer's representative informed the Committee that new toxicological studies were in progress; the results could be made available for re-evaluation by the 1992 JMPR.

Apricot

218. The delegation of the USA could not accept the proposed limit of 5 mg/kg, and proposed a re-evaluation by the JMPR of residue data and U.S.A. GAP, already provided.

Blueberries

219. The delegation of Hungary informed the Committee that the proposed value of 5 mg/kg was too high and that residue data had been submitted to the JMPR.

Lettuce, Head

220. The delegation of the USA supported a higher limit and requested review by the JMPR. The manufacturer's representative confirmed that available data would be submitted to the JMPR.

Status of MRLs

At Step 5 :	peppers, sweet; rape seed
At Step 5/8:	hops, dry
At Step 7B :	apricot; blueberries; lettuce, head

PROPICONAZOLE (160)

221. The delegation of Finland informed the Committee that their Scientific Expert Panel had recommended use of a safety margin of greater than 100 in estimating the ADI because of the possible tumour promoting effects of the compound. The Committee was informed by the WHO Secretariat that the same effects had been noted by the 1987 JMPR but that they had been interpreted differently in

relation to the ADI. The Committee was reminded that comments regarding the toxicological evaluations could also be addressed to the WHO Joint Secretary directly.

Cereal grains

222. The delegation of Finland indicated that, for toxicological reasons, the proposal of 0.1 mg/kg was not acceptable and that the Joint Nordic recommendation was 0.05 mg/kg. Some delegations preferred an MRL of 0.05 mg/kg for cereals based on information provided in the JMPR Report. The matter was referred to the JMPR (1991) to examine the possibility for establishing separate MRLs for cereals.

Grapes

223. In response to a question from the delegation of France, the Committee was informed that several countries have registered uses on grapes, with limits ranging from 0.2 to 1 mg/kg.

Status of MRLs

At Step 7B: cereal grains (except rice)
At Step 8 : all other proposals

PACLOBUTRAZOL (161)

224. The Committee agreed to advance the proposal to Step 8.

Status of MRLs

At Step 8: apple; stone fruits

TOLYLFLUANID (162)

Currants, black, red, white; Gherkin

225. The representative of FAO confirmed that residue data on currants were available for re-evaluation by the 1990 JMPR. The representative of the manufacturer would provide additional data to the JMPR on gherkins.

Pome fruits

226. The delegation of France noted that the proposal of 5 mg/kg seemed to be too high. An MRL of 2 mg/kg would be in agreement with the JMPR 1988 Evaluations. The delegation of the Federal Republic of Germany will re-evaluate their national MRL of 5 mg/kg.

Status of MRLs

At Step 6 : pome fruits
At Step 7B: currants, black, red, white
At Step 8 : gherkin; lettuce, head; strawberry; tomato

ANILAZINE (163)

Barley

227. Delegations and manufacturers were urgently invited to supply additional data.

Celery

228. Several delegations expressed reservations with regard to the proposed MRL, which was based on limited experiments from one country. The delegations of the USA and FRG supported the proposal. The delegations of the USA and FRG supported the proposal. Delegations were encouraged to provide residue data to the JMPR. The manufacturer offered to send additional data to the JMPR. These data were expected to support a limit of 10 mg/kg.

Tomato

229. The delegation of the United States informed the Committee that additional data were being required for continued support of the current 10 mg/kg USA tolerance.

Barley straw and fodder, dry; Wheat straw and Fodder, dry

230. The delegation of The Netherlands expressed a reservation because the residues given showed a large and unexplained variation.

231. The Committee agreed that information on animal products would be necessary, but a suitable method of analysis was not available. The Committee decided to make the proposals temporary awaiting a method of analysis for animal tissue.

Status of MRLs

At Step 5: all proposals

DEMETON-S-METHYLSULPHON (164)

232. The Committee noted that all matters concerning this pesticide had been discussed under demeton-S-methyl (073).

FLUSILAZOLE (165)

233. The Committee noted that a number of proposals were temporary since the database was limited. The Committee learned that in response to a request for more residue data the manufacturer was preparing a data package that would be reviewed by the 1991 JMPR.

234. Tolerances for flusilazole had not yet been established in the USA, but they were under consideration. Also under consideration in the USA was a definition of the residue of flusilazole for plant commodities and flusilazole and its silanol metabolite for products of animal origin. Consideration was being given to including silanol for animal products because residues thereof can significantly exceed those of flusilazole per se in some animal tissues.

Banana

235. The Committee was informed that though there was no USA tolerance, the proposed USA tolerance was 0.5 mg/kg (not more than 0.1 mg/kg in pulp) for banana.

Barley, Rye and Wheat

236. In the light of data available to the delegation of the Federal Republic of Germany, an MRL of 0.1 mg/kg did not seem necessary. The data available to The Netherlands did not support an MRL higher than 0.05 mg/kg. The delegation of the USA informed the Committee that data provided to the 1989 JMPR showed residues of 0.07 mg/kg which is consistent with a 0.1 mg/kg limit.

Cattle, Edible offal of

237. The delegation of The Netherlands preferred a somewhat higher level for regulatory purposes. The delegation of the USA suggested an MRL of 0.5 mg/kg for flusilazole and its silanol metabolite, although no tolerances had been established in that country.

238. The Committee agreed to refer the limit of determination for flusilazole to the Working Group on Analysis.

Dried Grapes and Grapes

239. Finland considered the proposed MRL for grapes (0.5 mg/kg) and for dried grapes (3 mg/kg) rather high in view of the low ADI. The delegation of the U.K. was concerned that a daily consumption of only 20 g of dried grapes would result in a TMDI greater than the ADI. The Committee suspected that the factors used for the calculation of an MRL of dry grapes were in error and referred the matter to JMPR for review. The delegation of The Netherlands expressed a reservation on the use pattern. The Committee noted that the preharvest intervals observed in Portugal (14 days), France (21 days) and Spain (45 days) were significantly different.

240. The Committee asked the JMPR to review the subject on the basis of additional GAP data to be provided by Portugal and other countries.

Sugar beet

241. The delegation of The Netherlands informed the Committee that the MRL at the limit of determination was rather low for routine control. Also, because there was evidence of possible residues from crop rotation, a somewhat higher limit was preferred. The delegation however could not propose any limit since it had no data. The Committee learned that The Netherlands used 0.05 mg/kg as a general limit of determination.

Status of MRLs

At Step 5: all proposals

OXYDEMETON-METHYL (166)

242. The Committee noted that all matters concerning the pesticide were discussed under demeton-S-methyl (073).

TERBUFOS (167)

243. Several delegations were of the opinion that in view of the (very) low ADI which was allocated to this compound, MRLs should be kept at the lowest possible level. The delegation of the Federal Republic of Germany drew attention to the acute toxicity of the compound. The delegation of the USA informed the Committee that their national ADI was 0.0013 mg/kg b.w. Delegations were invited to supply relevant data for establishing reduction factors for estimation of the EMDI. The toxicological monograph of this compound was inadvertently omitted from the 1989 Evaluations but will be included in the 1990 Evaluations.

Limit of determination

244. The delegation of The Netherlands noted that for several commodities MRLs at or about the limit of determination were proposed, varying from 0.005 (*) mg/kg to 0.05 (*) mg/kg. In their opinion, analytical differences in the behaviour of food crops did not justify such a wide range in the limits of determination, and they would support a more realistic value of 0.01 - 0.02 mg/kg. A limit of determination of 0.01 (*) mg/kg was advised by the Working Group on Methods of Analysis. Many of the MRLs proposed had however been generated in trials in which a higher limit was used.

Banana

245. The delegation of the USA was of the opinion that data would support a limit lower than 0.05 mg/kg since maximum residues were 0 to 0.025 mg/kg. The delegation of the Netherlands also could not support the proposal of 0.05 mg/kg, but recommended consideration by the JMPR because results from supervised trials indicated that 0.02 mg/kg was sufficient to cover registered uses.

Barley

246. The delegation of the USA questioned whether a limit should be established based on the single trial available to the JMPR.

Broccoli; Cabbages (head); Cauliflower

247. The Committee was informed that the compound was registered in New Zealand for soil treatment prior to planting and that an MRL at or about the limit of determination would permit such a use. The delegation of the USA questioned basing limits on residue data from geographical areas different from those for which there is GAP.

Cotton seed

248. The delegation of the USA could not support the proposal of 0.05 mg/kg because the data base is too limited. The Committee was informed that data would be generated by the manufacturer for evaluation by the JMPR at a future time.

Fodder beet leaves or tops

249. The delegation of the USA reserved its position at this time. Although the current US tolerance for sugar beet tops is 0.1 mg/kg, additional data are being required to support current uses and the current tolerance.

Potato

250. Several delegations expressed a reservation concerning the proposals of 0.5 mg/kg because the proposal was mainly based on old data for unwashed potatoes not covering registered uses. Data from recent trials based on current GAP, together with results of processing studies were required to establish a more realistic value. The Committee was informed that the manufacturer deemed it not economically feasible to generate this kind of information. The Committee agreed to delete the proposal at its next Session if no data were forthcoming.

Soybean

251. The delegation of the USA could not support the proposal of 0.05 (*) mg/kg. Data were available to the JMPR from only two trials and even these are from a country not recorded as having registered uses. No data were available from the one country recorded as having a national use.

Sugar beet

252. The delegation of The Netherlands could not support the proposals of 0.1 mg/kg but recommended consideration by the JMPR because residues resulting from trials based on registered uses were all below the limit of determination. The delegation of Austria stated that country had an MRL of 0.05 mg/kg.

Sweet corn (corn-on-the-cob)

253. The delegation of The Netherlands could not support the proposal of 0.05 mg/kg, since the highest measurable residue resulting from supervised trials based on registered use rates did not exceed 0.01 mg/kg.

Sweet corn (kernels)

254. The Committee agreed to delete the proposal at its next Session because a separate MRL for this commodity seemed not to be justified.

Status of MRLs

At Step 3: potato, sweet corn (kernels)
At Step 5: all other proposals

TRIADIMENOL (168)

255. It was noted by the Committee that the compound was closely related to triadimefon (133). Triadimenol is (together with triadimefon) on the agenda of the 1991 JMPR for residue evaluation. See also the discussion recorded for triadimefon, para 172.

Residue definition

256. The delegation of the USA expressed its reservation regarding the definition of the residue. The Codex proposals were for triadimenol only for plants and animals and US tolerances were for plant commodities: triadimenol and its butanediol metabolite expressed as triadimenol and for animal products: triadimenol and its metabolites containing the chlorophenoxy moiety, calculated as triadimenol.

Grapes

257. Several delegations could not support the proposal of 2 mg/kg. Available data would support 1 mg/kg. The delegation of the Federal Republic of Germany stated that their country has a registered use on grapes with a national tolerance of 2 mg/kg. Data would be made available to the JMPR.

Status of MRLS

At Step 5: all proposals

STATUS OF MAXIMUM RESIDUE LIMITS FOR PESTICIDE RESIDUES

258. The Committee had before it Room Document 5 (CX/PR 90/2-Add 4) concerning the status of Maximum Residue Limits for Pesticide Residues. The Committee was presently using additional Steps 7A, 7B and 7C indicating the status of the MRLs. This practice of the Committee did not fully reflect the procedure for the elaboration of Codex Maximum Limits for pesticide residues adopted by the Commission (Procedural Codex Manual 7th Edition). The Secretariat proposed that the Committee restrict itself to the procedure adopted by the Commission.

259. The Committee agreed with the observation of the delegation of Australia that the procedure used by the CCPR provided very useful information on the status of MRLs and proposed that it be retained.

CODEX GENERAL MAXIMUM LIMITS FOR FRUITS AND VEGETABLES (Agenda Item 8.1(a))

260. The Committee had before it document CX/PR 90/12 which contained a summary of General Maximum Residue Limits for Fruits and Vegetables. During the conversion of the Guide for Codex MRLs from the old classification to the classification adopted by the Commission at its 18th Session (CAC/PR 4-1989), it became clear that a number of pesticide/commodity combinations such as "fruit" and "vegetables" could not be considered under this new classification. The Committee discussed the Status of general Codex MRLs for fruits and vegetables for the following compounds.

ALDRIN AND DIELDRIN (001)

Fruit 0.05 mg/kg

261. The Committee was informed that the Working Group on Priorities proposed deletion of all the Codex MRLs since these pesticides were not being manufactured any more. The Committee was also informed that the data collected through the GEMS programme indicate that for fruits and vegetables indicate the 90th percentile concentration of the samples were lower than the limit of determination. The Committee decided to await further monitoring data.

AZINPHOS-METHYL (002)

Fruits 1 mg/kg, Vegetables 0.05 mg/kg

262. The Committee noted that the product was on the Agenda of the JMPR for 1991 and decided to await residue evaluation.

CHLORDANE (012)

Fruits and Vegetables 0.02 mg/kg (*) E

263. The Committee noted that no action was required and maintained the MRL.

DDT (021)

Fruits and Vegetables 1 mg/kg

264. The Committee requested the FAO to provide any assistance needed in order to obtain data on uses and decided to wait one year before the withdrawal of the MRL.

DIAZINON (022)

Fruits and Vegetables 0.5 mg/kg

265. The representative of the manufacturer informed the Committee that data for certain crops could be made available by 1992 in order to be reviewed by the 1993 JMPR. The Committee agreed to maintain the MRL, asking the Codex Secretariat to request information on GAP and relevant residue data by a Circular Letter.

DICHLORVOS (025)

Vegetables 0.5 mg/kg

266. The Committee decided to postpone deletion of the MRL for one year noting that the manufacturers may provide information.

267. This compound is on the agenda of the 1992 JMPR for both toxicological and residue review.

DICOFOL (026)

Fruit and Vegetables 5 mg/kg

268. Several delegations informed the Committee that the compound was used in several European countries and that the EEC had fixed limits for fruits (2 mg/kg) and vegetables (0.5 mg/kg). The Committee recognized that the Codex MRL was too high and did not reflect GAP, but considered the EEC limits based on old data. The Committee agreed to maintain the MRL provisionally. It asked the Codex Secretariat to request information on GAP and relevant residue data by a Circular Letter. The delegation of Israel undertook to provide data supporting 1 mg/kg for citrus fruit. The Committee decided to postpone the decision for one year. If no information became available the MRL would likely be withdrawn.

DIQUAT (031)

Vegetables 0.05 mg/kg

269. The Committee noted that the compound was on the agenda of the JMPR for 1990 and decided to postpone the decision concerning the withdrawal of the MRL for one year.

ENDOSULFAN (032)

Fruits and Vegetables 2 mg/kg

PIPERONYL BUTOXIDE (062)

Fruits and Vegetables 8 mg/kg

PYRETHRINS (063)

Fruits and Vegetables 1 mg/kg

270. The Committee recommended to the Commission the deletion of the above Codex MRLs.

HEPTACHLOR (043)

Vegetables 0.05 mg/kg E

271. Data was to be provided by the manufacturer for the 1991 JMPR for both toxicological and residue evaluation. Data on GAP had already been provided. The Committee decided to postpone the consideration of possible withdrawal of the MRL for one year.

PARAQUAT (057)

Vegetables 0.05 (*) mg/kg

272. The Committee noted that no action was required for this Codex MRL.

PARATHION (058)

Vegetables 0.7 mg/kg, Fruit 0.5 mg/kg

273. The delegation of The Netherlands informed the Committee that the compound was used widely and that data were available for apricot, citrus fruits and peach, but not for other fruits. The delegation of Canada informed the Committee that a database was being developed. The Committee agreed to postpone deletion and asked the Codex Secretariat to request information on GAP and residue data by a Circular Letter.

PARATHION METHYL (059)

Fruit 0.2 mg/kg

274. The Committee was informed that data may be provided by the manufacturer and decided to discuss this item at the next Session.

BROMOPROPYLATE (070)

Vegetables 1 mg/kg

275. Several delegations informed the Committee that the product was still used for vegetables and the Committee agreed to retain the Codex MRL awaiting the scheduled reviews of the 1992 JMPR for residue evaluation and the 1994 JMPR for toxicology.

DISULFOTON (074)

Vegetables 0.5 mg/kg

276. The Committee was informed that data would be provided by the manufacturer and decided to retain the MRL awaiting the JMPR review scheduled for 1991.

PROPOXUR (075)

Vegetables 3 mg/kg

277. The Committee was informed that the product was still used for vegetables and asked the Codex Secretariat to request information on GAP and residues data by a Circular Letter. If no information is obtained the MRL would be a candidate for deletion at the next Session.

CONSIDERATION OF GUIDELINE LEVELS (Agenda Item 8.2)

278. The Committee had before it the Guide to Codex Maximum Limits for Pesticide Residues - Part 3 (Index of Pesticide Chemicals for which Guideline Levels have been or may be set).

CARBON DISULPHIDE (009); CARBON TETRACHLORIDE (010); 1,2-DIBROMOETHANE (023); 1,2-DICHLOROETHANE (024)

279. As these compounds are fumigants they were referred to that Agenda Item (see para 287 - 301).

COUMAPHOS (018)

280. It was noted that the compound was on the agenda of the 1990 JMPR. Countries were urgently requested to provide data on current GAP to the JMPR. The GLs were maintained.

METHYL BROMIDE (025)

281. The Committee was informed that manufacturers were in the process of generating a full data package, which would make this compound a candidate for the priority list. The GLs were maintained. As this compound is a fumigant it was also discussed at that agenda item (see para 285).

BIORESMETHRIN (093)

282. The Committee was informed by the representative of the manufacturer that toxicological data were available for the 1991 JMPR as well as additional data on residues in stored cereals. The GLs were maintained.

DIALIFOS (098)

283. The Committee was informed that there will be no new data for the 1991 JMPR, because the compound was no longer supported by the major manufacturer. The GLs were withdrawn.

ETHEPHON (106)

284. The representative of the US manufacturer informed the Committee that a complete new data base on toxicology would be available in 1992 for evaluation by the 1993 JMPR. The GLs were maintained.

PROPYLENETHIOUREA (PTU) (150)

285. The compound is scheduled for evaluation by the 1993 JMPR and data will be available. The GLs were maintained.

PYRAZOPHOS (153)

286. The GLs were maintained because the compound was on the agenda of the 1992 JMPR. The Committee was informed that data will be available.

FUMIGANT RESIDUES IN FOOD (Agenda Item 9)

287. The delegation of Israel summarized the data on fumigants received from Australia, Canada, Greece, Guatemala, United Kingdom and Israel (see document CX/PR 90/14). The document was presented by Ms. M. Freund of this delegation. Although data had been submitted by the Netherlands and the USA, they did not reach the reviewers, while Cuba did not receive the Circular Letter concerned. According to the delegation of Israel, methyl bromide and phosphine were the major fumigants, while the other compounds such as 1,3-dichloropropene, dazomet and metham sodium were of secondary interest.

Discussion by the Committee

288. The delegations discussed data given in the document, which were summarised in the form of National MRLs for the different fumigants.

METHYL BROMIDE

289. Information concerning toxicity and residues was being developed by a panel of producers in the USA. The data might be submitted for the 1992 JMPR. The delegations of Australia, Canada and Israel undertook to provide residue data.

PHOSPHINE

290. The delegations of Australia, Canada and Israel informed the Committee that rather old data on GAP were available. Because several countries held the view that no residues must be present in commodities at consumption the Chairman proposed to establish MRLs on the basis of the limit of detection and invited delegates to submit comments before discussion at the next Session.

CHLOROPICRIN

291. This compound was not considered a priority in view of the expectation that it did not lead to residue problems.

ETHYLENE DIBROMIDE

292. The delegation of Australia informed the Committee that it is used for quarantine purposes, but not on cereals. As for phosphine the Chairman proposed to establish MRLs on the basis of the limit of detection which had to be lower than 0.1 mg/kg.

ETHYLENE OXIDE

293. This compound is used to a limited extent on herbs and spices and therefore is not considered a priority. There seems to be no toxicological data base to support residue levels. The Committee was informed that the remaining derogations for the use on herbs and spices in the EEC were due to end in January 1991.

CARBON DISULPHIDE

294. The compound had not been widely used in Australia and was cancelled in the USA. The delegation of Israel informed the meeting that it is used by developing countries. FAO will try to get information through its usual channels.

HYDROGEN CYANIDE

295. The compound is probably not widely available on a commercial scale, although its use was reported by delegations of the Netherlands, the USA, Australia and the Federal Republic of Germany. These delegations were asked to provide information while the Secretariat will request further information in a Circular Letter.

ETHYL FORMIATE

296. The delegation of Australia noted that there was little information available. The compound was not considered a priority.

TRICHLOROETHYLENE

297. The delegation of Australia noted that, in contrast with what was reported, the compound was not used on cereal grains and was therefore not considered a priority.

ETHYLENE DICHLORIDE

298. The delegation of Australia noted that there is a minor use for cereal grain machinery. The compound has been cancelled in the USA. FAO will request further information from developing countries.

METHYLISOTHIOCYANATE; 1,3-DICHLOROPROPENE

299. These compounds were not considered a priority as no residues were expected to result from current uses.

CARBON TETRACHLORIDE

300. The delegation of The Netherlands noted that the compound is still used. FAO will request further information from developing countries. If no information is obtained the compound will be withdrawn.

301. The Committee thanked the delegation of Israel for its document and the presentation thereof. After receipt of additional information the group of remaining priority fumigants will be reconsidered at the next Session.

ACCEPTANCES (Agenda Item 6(e))

302. The Joint Secretary of the WHO informed the Committee of a Conference, planned tentatively for March 18-27,1991, to be called the "Joint FAO/WHO

Conference on Food Standards, Chemicals in Food and Food Trade". The purpose of the Conference is to:

- review, as a whole, the Foods Standards Programme;
- provide feed-back on evaluations carried out by the expert committees;
- look at food trade issues.

Part of the conference, Chemicals in Food, will encompass food additives, contaminants, veterinary drugs and pesticides.

303. Under this agenda item 2 papers were considered: "Workshop on MRL Development", Room Document 8 and "Proposal to establish an Ad Hoc Working Group to review current JMPR and Codex procedures, with a view of facilitating the Acceptance by countries of Codex Maximum Residue Limits" Room Document 9. Room Document 8 was introduced by the Chairman of the Workshop concerned, Mr. D.J. Hamilton (Australia). Room Document 8 was introduced by the Irish delegation. Discussions of the two Room Documents were divided into two topic areas i.e. Technical Matters and Policy Issues.

(a) Technical matters

304. These matters were considered using Room Document 8 as the basis for discussion. Each section of the document was discussed as a whole.

i) GAP as a basis for Codex recommendations

305. The Chairman reminded the Committee that once again at this session national GAPs had been an obstacle to acceptance of MRLs. In view of this a proposal was put forward; if at Step 3 it became clear that variations in GAP would become a major obstacle for accepting MRLs, delegations would again review their national GAP to determine whether amendment would be possible and would come back at Step 6 to inform the Committee of the result. This recommendation received the support of the Committee although it was recognized that there would be resource implications for delegations. However, the Committee emphasized the importance of GAP needs of all countries being recognized. It was agreed also that the proposed guidelines for submitting GAP information to the JMPR would be of great assistance. Delegations were invited by the FAO Joint Secretary of the JMPR to make suggestions for developing such guidelines. A draft would be prepared for discussion at a future meeting. It was agreed that existing organizations such as the European Plant Protection Organization might be able, eventually, to assist JMPR in the evaluation of GAP data. The delegation of the Federal Republic of Germany indicated that it was not only necessary to define GAP, but that criteria had also to be developed to explain the use of GAP within the JMPR and the CCPR. When it would be necessary for countries to accept MRLs higher than necessitated by domestic GAP, i.e. because of GAP in other countries, delegations had to be able to explain these differences in their own countries. The criteria referred to were necessary to support the credibility of the CCPR. In addition the delegation expressed support for the establishment of an expert working group on GAP.

ii) Evaluation of residues data

306. The Committee agreed that guidelines on the evaluation of residues data and the estimation of MRLs should be developed by FAO in consultation with the CCPR. Much of the information exists already in the JMPR Reports and various Codex documents.

iii) Toxicology and intake

307. Representatives of WHO (Dr. J. Herrman and Dr. H. Galal-Gorchev) indicated that the questions and recommendations in Part 3 of Room Document 8 raised important issues, that effort would continue to make the WHO documents as useful as possible and that certain of the recommendations, if followed, would make the dietary intake work of the WHO easier. Delegations in general supported the recommendations with the exception of recommendation #6 i.e. that WHO consider expanding its reviews of pesticides to include occupational health and environmental considerations. The concerns were directed mostly at the need for increased resources and broader expertise and the possibility of the current efforts suffering as a result of significant new responsibilities. With respect to recommendation #3 i.e. that intake calculations be a part of the Report of the JMPR, it was agreed that caution should be used in presenting the figures for TMDIs and EMDIs so as not to raise undue public concern. The principles outlined in the document "Guidelines on Dietary Intake" were again emphasized. With respect to Recommendation #7 it was agreed that data on combinations of pesticides should be presented to the JMPR when available and relevant but that the basic approach of evaluating individual compounds should continue. In regard to recommendation #5 it was agreed by the Committee that governments that object to MRLs on the basis of dietary intake present details of their estimates to the CCPR to assist delegations in understanding the concerns expressed. With respect the WHO document "Principles for the Toxicological Assessment of Pesticide Residues", (104, Environmental Health Criteria Series), this document would now be in the process of distribution. The Committee requested that it be placed on the free distribution list for Codex Contact Points.

iv) Enforcement policies

308. With respect to the recommendations in this section, the representative of the AOAC pointed out that such principles were covered in previous reports of the Ad Hoc Working Group on Methods of Analysis and of the JMPR.

(b) Policy considerations and establishment of an Ad Hoc Working Group on Acceptances

309. The basis for these discussions was Room Document 9, which had been prepared by the delegation of Ireland. The delegation of Greece commended the CCPR for progress in establishing MRLs but suggested that more effort was necessary and proposed that the FAO organize regional workshops to explain the procedures used in proposing and adopting MRLs. The FAO Joint Secretary of the JMPR indicated that consideration would be given to this proposal by the FAO in consultation with the Codex Secretariat. Many delegations supported the proposal of the Irish delegation that an ad hoc Working Group on Acceptances be established to study means of improving the acceptability of Codex MRLs to member countries. The mandate of the Working Group would include considerations of both technical and policy issues involved in improving the acceptability of Codex MRLs.

310. It was agreed to append Room Documents 8 and 9 to the Report of the Meeting and to invite written comments from delegates and the JMPR. A working paper incorporating these comments and comments raised at the 22nd session of the CCPR would be prepared for consideration by the ad hoc Working Group on Acceptances and by the Committee at its next Session. This draft working paper would be prepared in time for the FAO/WHO Conference on Food Standards, Chemicals in Food and Food Trade. A meeting of the Working Group was scheduled for Saturday April 13, 1991, before the 23rd CCPR.

311. Membership in the Working Group was open to all interested delegations. Several delegations and organizations, including those of Israel, France, Egypt, Finland, New Zealand, the Netherlands, Austria, Australia, Switzerland, USA, Federal Republic of Germany, United Kingdom, Sweden, Canada and GIFAP expressed interest in participating.

312. Mr. Murray of the Canadian delegation was appointed as the focal point for the submission of comments and preparation of the proposed draft working paper and as Chairman for the new Ad Hoc Working Group.

RECOMMENDED METHOD OF SAMPLING FOR THE DETERMINATION OF PESTICIDE RESIDUES IN MEAT AND POULTRY PRODUCTS FOR CONTROL PURPOSES (Agenda item 10)

313. At its 18th Session, the Commission advanced the Draft Report (APPENDIX II, ALINORM 89/24A) to Step 6. The Committee expressed its thanks to Ms. M. Cordle who had prepared this document. Mr. Carnevale reintroduced the document and stated that the delegation of the United States would like to propose some minor modifications to the document dealing with sampling prior to or at the time of slaughter. Several delegations supported the proposed modifications.

314. The Committee agreed to add the following inclusion to ALINORM 89/24A Appendix I at the beginning of item 2, Part A, Introduction:

> It is important to emphasize that for effective residue control in meat and poultry products intended for export, sampling should occur at the time of slaughter before the product is packaged or further processed for commerce. Only at slaughter are fresh target tissues routinely available for determining the presence of residues. There is also a greater likelihood of sampling animals which have been raised under uniform conditions, and thus with more uniform exposure to a pesticide which allows findings to be extrapolated to the larger population. Sampling at point of entry of packaged meat products should be designed for quality assurance purposes in monitoring the effectiveness of a member country's domestic residue control programme, but should not be viewed as the most effective means of controlling pesticide residues.

315. The delegation of Australia questioned the need for a sample size as large as 0.5 kg for fat of animals defined in Group 031 A and B and requested that this be re-examined. The representative of the AOAC pointed out the sample must be large enough to allow sample splitting.

316. The Secretariat was requested to send out a Circular Letter enabling governments to submit any additional comments to Mr. Carnevale who will produce an updated version of the recommended method.

317. Some delegations were of the opinion that it might be necessary to add a third part dealing with milk, dairy products and fish. The delegation of the United Kingdom agreed to prepare an annex to the guidelines of sampling dealing with fish and milks. However, the Committee agreed the preparation of such guidelines would not delay the acceptance of the present document.

318. The Committee agreed to return the amended document to Step 6.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON METHODS OF ANALYSIS (Agenda Item 11)

319. The report was introduced by the Chairman of the Working Group, Mr. L.G.M.Th. Tuinstra (The Netherlands). The report was presented to the Committee, and is attached to this report as Appendix III.

320. Mr. Tuinstra informed the Committee that this year no revision of the list of recommendations for methods of analysis would be published. A new version of the list, for which participants were requested to submit information, will be prepared in 1991. Regarding the topics of Good Laboratory Practice (GLP) and Analytical Quality Assurance (AQA) the Committee was informed that the document published as Part 7 of the Guide was still valid, but would be updated in the (near) future. In the meantime, cross references to documents with respect to GLP and AQA should be included in Part 8 and in Part 5 of the Guide. The Group proposed reasonable limits of determination for terbufos, phorate and carbendazim, but it could not propose a general limit of determination for benalaxyl in the absence of a suitable analytical method in the open literature.

321. The Committee was informed that, within the coming years, a break-through of Mass Spectrometry methods for use under daily circumstances could be expected. With reference to glyphosate, the Group confirmed an advice which was given several years ago by the Ad Hoc Working Group on Sampling not to correct analytical data for low recoveries.

Discussion by the Committee

322. The delegation of Ireland drew attention to the need for information on (newly developed) multiresidue methods and validation of these methods by means of ringstudies to a limited extent (in cases analytical difficulties would be expected). The Chairman of the Working Group doubted whether ringstudies should be incorporated into the activities of the Working Group, but agreed to consider the matter at its next Session. The representative of the AOAC was of the same opinion.

323. The delegations of Ireland and France requested the Working Group to explore possibilities of exchange of information on the extension of multiresidue methods to new substances and substrates. This item should be dealt with at the next Session of the Working Group.

324. The delegation of Egypt stressed the need to incorporate more simplified analytical methods, which can also determine relevant metabolites, into the recommendations. The Chairman of the Working Group shared the opinion of the delegate of Egypt, but indicated that such methods have to become available to the Working Group.

325. The representative of the AOAC informed the Committee on the issuance of the latest edition of the AOAC book of methods, now comprising 2 volumes. He also mentioned the foundation in October last year of an European regional section of the AOAC. The European section has announced an International Symposium, which would be held in October 1990 in Brussels.

326. The Committee endorsed the report of the Working Group.

Appointment of an ad hoc Working Group on Methods of Analysis

327. The Committee thanked the Working Group and its Chairman and Vice-chairman for the work done prior to and during the Session. It was decided to set up a new

Ad Hoc Working Group under the Chairmanship of Mr. L.M.G.Th. Tuinstra and Vice-chairmanship of Mr. P. van Zoonen.

CONSIDERATION OF THE REPORT OF THE WORKING GROUP ON PESTICIDE PROBLEMS IN DEVELOPING COUNTRIES (Agenda Item 12)

328. The report of the above ad hoc Working Group (see APPENDIX IV to this Report) was introduced by its Chairman Ms. Salwa Dogheim (Egypt). She expressed appreciation for the active participation of 15 developing countries and Dr. G.N. Hooper of Australia, regional Chairman for the South West Pacific.

329. The Committee noted that the Working Group addressed the following six areas:

1. Strengthening of regulatory infrastructures to control the supply and use of pesticides.

2. Ways and means to i) sustain the existing laboratories ii) Procure analytical standards and iii) Provide finances for purchase of chemicals and spare parts for equipment.

3. Generation of data on GAP with the support of industry.

4. Organization of seminars and workshop on GAP and acceptance of Codex MRLs.

5. Survey to ascertain pesticide commodities combinations in current use in developing countries.

6. Acceptance of Codex MRLs by the industrialized developed countries.

330. The Committee discussed in detail the recommendations of the Working Group. The following comments were made.

Recommendation 1

331. The Committee noted that the recommendation was addressed to the governments of the developing countries and expressed its full agreement. The delegation of Mexico informed the Committee, that in its view the regional organizations should provide assistance for setting up regional laboratories. The reference laboratories for Central America situated in Guatemala indeed received assistance from the Central American Institute of Agriculture and Cattle development.

Recommendation 2

332. While introducing recommendation 2, Ms. Dogheim made an additional proposal that levying a tax on imports of pesticides may be considered by the governments as a means for financing the purchase of laboratory chemicals and spare parts for equipment. This was however opposed by the delegations of Argentina, Chile, Mozambique, Mexico, Iran and Libya which hold the view that fiscal and tax matters should not be a subject for recommendation at Codex meetings.

333. In support of the additional proposal as made above by the Chairman of the Working Group, the delegation of Egypt informed the Committee that the government of Egypt is considering levying a fee of 0.5 % on imports of its pesticides which amounts to about 120 million dollars per annum. The delegation of Cuba recommended that such proposal be studied.

334. The Committee however expressed its view that there was some merit in the additional proposal made by the Chairman of the Working Group. This should be discussed at its next Session. The recommendation without the additional proposal by the Chairman of the Working Group was supported.

Recommendation 3

335. The delegation of India informed the Committee, that India has registered 126 pesticides and had no problems until a few years ago in receiving analytical standards for pesticides and also their metabolites when EPA stopped assisting the country. The delegation of Mexico informed the Committee that its government has a provision of analytical standards by the manufacturer as a prerequisite for registration of the pesticide.

336. The observer from GIFAP informed the Committee that GIFAP is aware of previous problems experienced by some countries in obtaining analytical standards and authentic metabolites. This problem is being reviewed by technical working groups of GIFAP and it is anticipated that a discussion paper will be prepared for consideration by the next (23rd) Session of CCPR.

337. The Committee supported the recommendation noting however that analytical standards of pesticides and their metabolites are available from commercial organizations.

Recommendation 4

338. The Committee was informed that GIFAP has, on many occasions, encouraged the pesticide industry to support the various aspects of the work of JMPR and CCPR. Specifically, manufacturers have been encouraged to help avoid, or to resolve, problems in international trade by applying for MRLs in specific importing countries as needed to accommodate residues on commodities moving in international trade. Where appropriate, this activity can form part of the rational registration process in importing countries.

339. In those cases where a previous JMPR evaluation did not result in an MRL recommendation because of insufficient data on an important export commodity, concerned governments should find useful a discussion with basic manufacturers, since appropriate data might yet be available. Past experience has also shown that several basic manufacturers have been willing to analyze, in their own laboratories, crops which had been treated in government supervised field trials in exporting countries, to generate residues data for submission to the JMPR and/or governments of importing countries. Detailed discussions with the manufacturer on the design and conduct of the studies is important before any programme is initiated. Several CXLs, on citrus, have come into existence through such co-operation.

340. In encouraging governments to maintain a dialogue with manufacturers on these matters, GIFAP has also encouraged industry to respond positively to proposals, whenever possible. Regarding the comment made at the 21st Session of CCPR (ALINORM 89/24A, paragraph 285) that countries have nevertheless experienced difficulties in obtaining co-operation, it is recommended that the difficulties be referred also to the GIFAP Secretariat, so that all possibilities can be considered.

341. The GIFAP recommendations on this topic are re-enforced on page 19 of the GIFAP Manual on Working with JMPR and CCPR, which was distributed during the 20th

Session of the CCPR. A copy of the manual can be obtained, free of charge, by writing to GIFAP.

342. The Committee noted that this was an ongoing activity of GIFAP and was grateful for the continued offer of GIFAP. The recommendation was supported.

Recommendation 5

343. The Committee supported the recommendation which in its view was relevant to developed countries as well.

Recommendation 6

344. The Committee while supporting the recommendation noted that the present FAO assistance to developing countries included setting up of pesticide formulation laboratories in Gambia, Ghana and Pakistan and residue laboratories in Myanmar and Vietnam.

Recommendation 7

345. The Committee noted that this was a useful exercise and agreed to undertake it. Dr. G.N. Hooper of Australia speaking as the Regional Chairman for South West Pacific gave details of a questionnaire that he sent out to all countries in the South West Pacific for information on pesticides in current use and the pesticide/commodity combinations of interest.

346. The delegation of Mexico volunteered to design a questionnaire in consultation with Dr. Hooper of Australia and to collect relevant information from all the developing countries, countries of South West Pacific excluded, since they had already responded to a similar questionnaire.

347. The delegation of India informed the Committee that quinalphos was widely used in the country for which Codex MRLs were not established. The delegation was reminded by the Chairman of the CCPR of the existing mechanism in the Committee for initiation of such an exercise.

Recommendation 8

348. The delegation of the USA supported the recommendation but informed the Committee that the developing countries should recognize that commodities they export should not contain residues of pesticides, not registered by the importing country. The delegation of Mexico informed the Committee that there could be cases where the export commodities may contain residues of pesticides not registered by the importing country and cited as an example the non-existence of the crop commodity in the importing country. The delegation urged the recognition and acceptance of Codex MRLs where national tolerances do not exist. The Committee supported the recommendation.

Extrapolation of data

349. The attention of the Committee was drawn to the invitation of the 1989 JMPR to the Ad Hoc Working Group on Pesticide Residue Problems in Developing Countries to supply examples of extrapolations desirable to estimate MRLs for commodities of interest to developing countries by extrapolation from existing residue data. The Committee agreed that information as above should be collected by a questionnaire and asked the delegation of Mexico to include it in the questionnaire that it would be sending to all developing countries (see para 346).

Nomination of Regional Chairmen

350. The Committee noted the appointment of Regional Chairmen for the regions of Asia, Latin America, Africa and South West Pacific (para 16, Appendix IV). Ms Salwa Dogheim (Egypt) agreed to continue as the Chairman until the end of the 23rd Session.

Appointment of an ad hoc Working Group

351. The Committee thanked the participants and the Chairman of the Working Group for their work. A new ad hoc Working Group was established to act until the next Session, with the same Chairman and regional Chairman as previously.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON PRIORITIES (Agenda Item 13)

352. The Committee had before it the report of the Working Group which was introduced by its Chairman Ms. J. Taylor (Canada).

CONSIDERATION OF 1990 PROPOSAL FOR THE PRIORITY LIST

353. In the light of information on the availability of data, new proposals were prioritized as follows:

Number	Common Name	Country Available	Data	JMPR	Manufacturer
90-01	Cadusafos (Ebufos)	Mexico	1990	1991	FMC
90-02	Buprofezin	Spain	1990	1991	Nihon Nohyaku
90-03	Glufosinate-ammonium	FRG	1990	1991	Hoechst
90-04	Abamectin	Spain	1991	1992	Merck
90-05	Penconazole	FRG	1991	1992	Ciba-Geigy
90-06	Cycloxydim	Netherlands	1991	1992	BASF
90-07	Quinalphos	Sweden	-	-	Sandoz
90-08	Fenarimol	Sweden	-	-	Elanco

354. The Working Group was given a list of new compounds for which companies would be willing to submit data to the JMPR. Countries which have an interest in sponsoring one of the following compounds may contact the Chairman of the Working Group.

fenpropathrin - Sumitomo
myclobutanil - Rohm and Haas
teflubenzuron - Shell
bifenthrin - FMC
etofenprox - Mitsui Toatsu

355. The Committee was informed that New Zealand would be prepared to sponsor myclobutanil and Mexico would be prepared to sponsor bifenthrin.

Re-evaluation of pesticides evaluated prior to 1976

356. The Working Group continued its evaluation of the 43 compounds which were evaluated by the JMPR prior to 1976. As reported at the 21st meeting (ALINORM 89/24, para 289), twenty one compounds have been scheduled for re-evaluation by the JMPR (see APPENDIX V, PART I).

357. The remaining twenty-two compounds were divided into five groups as given in Appendix V. The Committee agreed that the CXLs be deleted for crufomate (019), dioxathion (028), diphenyl (029) and fenchlorphos (036) at the next session unless new information becomes available. Codex MRLs would be maintained for aldrin and dieldrin (001) and endrin (033) until sufficient monitoring data are available for the proposal of ERLs to replace MRLs.

358. The Committee agreed that additional information is required for bromophos (004), bromophos-ethyl (005), chlormequat (015), ethoxyquin (035) and mevinphos (053), which are candidates for cancellation of their CXLs at the next Session.

359. The Committee was informed that the major use of ethoxyquin is as an additive in animal feeding stuffs.

360. Five compounds: 2,4-D (020), formothion (040), pyrethrins (063), dodine (084) and pirimifos-methyl (086), were found to have continued use and the manufacturers may be able to submit data. It was noted that JMPR reviews have been or will be scheduled for dichlorvos (025), dicofol (026), heptachlor (043), parathion (058), quintozene (065) and amitrole (079).

Compounds proposed for evaluation by the Joint FAO/WHO Meeting on Pesticide Residues

361. The proposed schedule for evaluation and re-evaluation of toxicology data by the JMPR was presented by the representative of WHO. The schedule, together with a similar schedule for residue evaluations is attached (see Appendix V, Part II). Companies were requested to contact the Joint Secretaries as soon as possible if they could not supply toxicological data by June of the year preceding the year of review and residue data by March of the year of review. He also informed the Committee that the JMPR had to review so many new compounds in the next two years that any new proposal could not be dealt with before the 1993 JMPR.

Re-evaluation of pesticides evaluated between 1976 and 1980

362. The Committee was informed that the Working Group planned to present a list of pesticides evaluated between 1976 and 1980 at the next Session of the CCPR.

Appointment of a new ad hoc Working Group

363. It was decided to establish a new ad hoc Working Group which should function until the end of the next Session under the Chairmanship of Ms. J. Taylor (Canada).

CODEX MAXIMUM LIMITS FOR PESTICIDE RESIDUES IN PROCESSED FOODS (Agenda Item 14)

364. The Committee had before it Room Document 12, containing a summary of the decisions taken by it on the subject, at earlier sessions.

365. The CCPR had considered the problem of residues of pesticides in processed foods at its 11th Session and on that occasion the Committee had agreed that it would be feasible and desirable to cover pesticide residues in processed foods. At its 12th Session the Committee decided to develop guidelines on how processed foods should be handled in relation to pesticide residues. The guidelines, prepared by the delegations of Australia and USA, were adopted by the Committee at that Session and introduced into the Guide to Maximum Limits for Pesticide Residues. Since 1980 MRLs had been proposed for several categories of processed foods and on this basis the Committee was informed that if necessary MRLs could be established for other products, e.g. wines, for which provisions had already been made to incorporate them into the classification. The delegation of France, sustained by the delegation of Belgium, supported the statement of the Room Document and considered that wine was an important product moving in international trade and MRLs could be established by Codex to ensure fair practices in the food trade and protecting the health of the consumers. The delegation of the U.K. in general did not oppose the CCPR involvement in the elaboration of MRLs in processed foods where this was absolutely necessary, but was concerned by the potential work commitment this might involve. As far as wine was concerned, the U.K. thought that the process of vinification would make it difficult to set MRLs. It would be preferable to set MRLs for grapes and distinguish between wine grapes and table grapes. The delegation of the Netherlands supported the establishment of MRLs in processed foods in general and in wine in particular, and also drew attention to the desirability of the development of MRLs for fruit juices. The delegation of Mexico supported the work of the Secretariat in the elaboration of the Conference Room Document 12, but did not agree that MRLs should be established for wine. The delegation of Argentina, supported by the delegation of United States of America had objections against the establishment of MRLs in wine. The U.S.A. supported the UK concerning MRLs in grapes. The delegation of Canada expressed a general reservation on establishment of MRLs for processed foods. The AOAC representative informed the Committee that the JMPR would not establish MRLs unless a clear directive was given by CCPR.

366. The Committee decided to attach Room Document 12 to this report as Appendix VI and requested comments by means of a Circular Letter. A future approach to be taken by the Committee should be consistent with the general approach an mentioned before.

EXPRESSION AND APPLICATION OF MRLs FOR FAT SOLUBLE PESTICIDES IN MEAT, ANIMAL FAT AND EDIBLE OFFAL (MAMMALIAN)

367. The Committee had before it Room Document 13 containing a proposal from The Netherlands for the expression and application of MRLs for fat soluble pesticides in meat, animal fat and edible offal (mammalian).

368. The delegation of The Netherlands drew the attention of the Committee to an EEC directive on the subject and proposed that a similar procedure be followed by CCPR to express MRLs in meat, on the basis of MRLs in fat. The procedure which proposes a cut off point at 10 % fat level could also be followed for expression of MRLs in edible offal too. Following the EEC directive, MRLs established for meat with a fat-content greater than 10 % would apply to the fat. For meat which contains 10 % fat or less, the limit would be related to the total commodity (without bones). In that case, the applicable limit would be 1/10th of the MRL established for the fat, but not less than 0.01 mg/kg. The delegation of France and FRG supported the Netherlands' proposal. The Committee recalled that a similar procedure was followed for expression of MRLs in milk and expressed the view that the matter should also be referred to the Working Group on Methods of Analysis and

comments on the proposal of The Netherlands should be sought from governments by means of a Circular Letter.

INVITATION FROM CUBA TO HOLD A CCPR SESSION IN HAVANA

369. The Government of Cuba extended an invitation to The Netherlands to hold a future session of CCPR in Havana. The Committee was informed that excellent facilities are available in Havana to hold a Session of an intergovernmental Committee like the CCPR. The Chairman of the Committee will shortly visit Havana to have discussion with the Cuban Government to evaluate the facilities in Cuba. If Cuba and The Netherlands would agree that technically a Session in Cuba is feasible, then Cuba would extend a formal invitation for consideration by the Committee.

DATE AND PLACE OF THE NEXT SESSION

370. The Chairman informed the Committee that the 23rd Session would be held in The Hague from 15 - 22 April 1991. The Committee was informed that the ad hoc Working Group on Acceptances would hold its meeting on 13 April 1991.

SUMMARY STATUS OF WORK

Recommendation	Step	For Action by:	Document Reference
Updating of the Questionnaire on national regulatory practices for pesticide residues in foods	--	Mr. J. Wessel	paras. 42-44, ALINORM 91/24
Notification of acceptances using the new form	--	Governments Secretariat	paras. 45-46, ALINORM 91/24
Calculations of Estimated Daily Intakes at the national level	--	Governments WHO	para. 52, ALINORM 91/24
Information on residue levels and reduction factors to JMPR	--	Governments JMPR	para. 66, ALINORM 91/24
Updating and publication of Part 6 of the Guide	--	Secretariat	paras. 67-70, ALINORM 91/24
Separate classification for virgin olive oil	--	Secretariat	para. 73, ALINORM 91/24
Proposed Draft MRLs	5	CAC	ALINORM 91/24, Add. 1
Proposed Draft MRLs	5/8	CAC	ALINORM 91/24, Add. 1
Draft MRLs	8	CAC	ALINORM 91/24, Add. 1
Proposed non-substantial amendments to Codex MRLs	--	CAC	ALINORM 91/24, Add. 1
Proposed Draft MRLs } Proposed Draft MRLs }	3 6	Governments Governments	CL 1990/20-PR (ALINORM 91/24)
Priority List for fumigants	--	Governments Industry Secretariat	paras. 287-300, ALINORM 91/24
Recommendations from the Workshop on MRL Development	--	Governments JMPR CCPR Secretariat	paras. 303-307, ALINORM 91/24
Establishment of an Ad Hoc Working Group on Acceptances	--	CCPR Secretariat Governments	paras. 309-312, ALINORM 91/24

SUMMARY STATUS OF WORK (Cont'd)

Recommendation	Step	For Action by:	Document Reference
Draft Recommended Method of Sampling for the Determination of Pesticide Residues in Meat and Poultry Products for control purposes	6	Governments CCPR	paras. 313-317, ALINORM 91/24
Recommendation for methods of residue analysis	--	Governments Secretariat	paras. 319-325, ALINORM 91/24
Recommendation concerning pesticide residue problems in developing countries	--	CAC Organizations Governments Industry Secretariat	paras. 328-351, ALINORM 91/24
Re-evaluation of pesticides evaluated prior to 1976	--	Governments Industry JMPR	paras. 356-362, ALINORM 91/24 CL 1990/20-PR
List of Pesticides for evaluation by the JMPR:			
- List of pesticides to be evaluated by the JMPR	--	JMPR Governments Industry	paras. 353-354, and Appendix V, Part II, ALINORM 91/24
- Further additions to Priority List	--	Governments Industry CCPR	para. 362, ALINORM 91/24

ALINORM 91/24
APPENDIX I

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APPENDIX II

Speech of Dr. H.J. Simons, State Secretary of the Ministry of Welfare, Health and Cultural Affairs, on the occasion of the opening of the 22nd Session of the

CODEX COMMITTEE ON PESTICIDE RESIDUES

The Hague, 23 April 1990

Ladies and Gentlemen,

It is my great pleasure to welcome you, on behalf of the government of The Netherlands, to The Hague on the occasion of the 22nd Session of the Codex Committee on Pesticide Residues. During all these meetings, it has been the honour and the great pleasure of The Netherlands to be your host and to try to facilitate your work. Your presence at this meeting is a token of your commitment to contribute to ensure a healthy food supply and to increase mutual understanding of health risks and preventive health policies.

21 Sessions have already taken place. Your Committee has a long tradition and has on the whole a very positive record. It has gained wide international esteem and played a vital role in a number of developments in the field of pesticides, public health and agriculture. It also has acquired a number of fixed rules and habits. Although traditions often play a positive role in life, it may be good to reconsider them periodically, to see whether they still fit into the present situation. In the field of work of this Committee, this means reconsideration in the light of the changing conditions, knowledge and opinions regarding Public Health, Food Production and Agriculture.

Notwithstanding the generally very positive record of your Committee, we have to face the situation, that several countries have problems in accepting certain Codex Maximum Residue Limits for pesticides. The reasons for these problems have been subject of study by the Committee and will again be part of the discussions during this week. I would encourage you to continue these discussions with an open mind, taking into account that situations and conditions may be different now from what they were in the past.

In many countries, the ways of food production, the role of pesticides in this production, the presence of contaminants in food or the use of additives are seriously questioned. The public awareness about these matters is highly active and sensitive. As an example from my country: in the last months the role of waste incineration in the production of dioxins and, as a consequence thereof, the presence of dioxins in milk and milk-products in the immediate neighbourhood of these incinerators has been clearly demonstrated. You can imagine that such a situation must have wide-reaching consequences for a country like The Netherlands, densely populated, with some 20 municipal waste incinerators, mainly located very close to land where cattle are grazing. The government had to take hard measures, including a prohibition for contaminated milk to be delivered to consumers in two areas where a tolerable standard for dioxins was exceeded.

Another example. The agricultural policy of this country and of the European Communities has for many years concentrated on intensification of production, making full use of modern technology, of abundant amounts of fertilisers and a wide variety of pesticides. The limits of this policy gradually have come to our attention. They can be expressed in terms of over-production of for example cereals and in environmental effects, such as the leaching of nitrate to groundwater. Dutch cereal growers have in

the last months made it very clear, that continuing the actual national and EEC policy in this area will lead them into bankrupcy. Gradually, the view is emerging that we will have to limit production, increase its quality and decrease the dependence on chemicals in production. This re-orientation of agricultural policy within the European Communities will also have significant effects on subjects under discussion in your Committee, such as what you call Good Agricultural Practices.

A third example is the case of Alar, Daminozide. Although the product is duly registered in this country, the production board of fruit growers, which is a public authority, a few weeks ago took the decision that the use of daminozide on apples by their members was not longer allowed. And fruit growing in The Netherlands against the regulations of this production board is illegal. The reason for this decision was not concern for public health, but concern about consumer-attitudes and finally for sales. However, certain varieties of apples need the use of daminozide under our climatological conditions. Therefore, the future of these varieties and of their growers is uncertain. The latter case is of course a direct consequence of the Alar/daminozide case in the USA.

Pesticides continue to receive broad public and political attention, and rightly so. The control of unwanted or harmful organisms by means of intrinsic toxic chemicals should never go without questioning such use. We know of too many cases in which pesticides have been reported to have negative effects for man or the environment. Residues of pesticides in foodstuffs are actively regulated in many countries since many years. Environmental considerations have gained much attention in the last decade. More recent is an increased attention for workers safety in the use of pesticides.

Recent investigations in my country in the sector of flower-bulb production have shown reasons for concern for workers safety in certain production areas. It is the explicit intention of my government to decrease the dependency of agriculture on pesticides. One of the ways to express this is the policy to reduce the amount of pesticides used with 50 % in the year 2000.

The last months again have given us a number of interesting examples of the role pesticides may play in the perception of risks by consumers and politicians or the role they may play in trade. The case of Alar, daminozide, mentioned already, is not only very enlightening, but its consequences will certainly keep policy-makers busy for still some time. And not only policy makers, but also scientists from various agencies. We now face the situation in which the toxicology of daminozide has been evaluated by US-EPA and other national agencies, by WHO-JMPR and by the EC-Scientific Committee on Pesticides. All with different outcomes. Such a situation is of course not very helpful for policy-makers, nor for the general public which is supposed to believe what scientists tell them. In fact, such a situation contributes to the further erosion of confidence in the scientific community. And it also contributes to a further erosion of confidence in regulatory agencies which want to base themselves on science more than on feelings or newspaper headlines. This Committee will during this session have to discuss the proposals of the last JMPR regarding daminozide on apples and pears and will thus be confronted with the outcome of these scientific toxicological evaluations.

The recent case of the presence of procymidone in certain wines which resulted in serious trade problems between the European Communities and the USA is another example of sometimes far-reaching consequences of the use of a pesticide. Although public health does not seem to be directly involved in this case, it is also part of your mandate to facilitate international trade in foodstuffs, without of course neglecting the health of the consumer.

One of the problems that your Committee faces, and which is a problem of the Codex Alimentarius as a whole, is the wide variation in conditions that exist throughout the world. Differences in food growing, food production, trade systems,

economic conditions, differences in policies. The case of procymidone is a reflection of such differences in policies. It is your role to try to harmonise into acceptable standards the reflection of all these differences. Your participation in the Codex framework means, that you are prepared to accept in principle the consequences of the conditions prevailing in other countries. In looking for acceptable international standards, it is my firm opinion that a sound scientific basis should be the start of all deliberations. Therefore, the close cooperation with the FAO/WHO Joint Meeting on Pesticide Residues should continue to be at the heart of the matter. Therefore also, I would encourage all delegations to increase their input into the JMPR, enabling them to provide you with the scientific input you need in proposing international standards for pesticide residues in food. Only if your conclusions have sufficient scientific background, will they prove to be able in the long run to resist against criticism of different kinds.

I am particularly glad to note, that the participation from what are usually called developing countries is probably higher than at any previous Session of this Committee. We are very much aware of the specific problems that these countries face, as producers, as exporters and as importers of foodstuffs. The focus in this part of the world over the last months has been oriented towards Eastern Europe, but this should not be at the expense of developing countries.

The Netherlands fully subscribe to the FAO Code of Conduct in the distribution and use of pesticides, including the recent incorporation of the principle of Prior Informed Consent. My government is also actively participating in various training programmes that have been initiated over the last years. We are firmly committed to a continued cooperation.

I know that your meeting is highly technical in character, but it is my wish that it will contribute to diminish the gap between scientists and technicians at one hand and policy makers and the public at large at the other hand and that it will reflect the changes in thinking about agriculture, food production and public health.

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APPENDIX III

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

1. The Working Group met under the chairmanship of Mr. L.G.M. Tuinstra and Mr. P. van Zoonen (The Netherlands). The following countries and organizations attended: Australia, Belgium, China (Peoples Republic of), Dominican Republic, Finland, France, Germany (Federal Republic of), Greece, Ireland, The Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, United States of America, Association of Official Analytical Chemists (AOAC), International Union of Pure and Applied Chemistry (IUPAC).

REVISION OF THE LIST OF RECOMMENDATIONS FOR METHODS OF ANALYSIS

2. A revised list of recommendations for methods of analysis was discussed by the Group. Up-dating of the recommendations is a continuous and ongoing activity of the Group. As not all the necessary information could be provided during the meeting, the participants were requested to make available information on "new" compounds (162 to 168) and also on some of the older compounds (1 to 162) as quickly as possible. A special call for information was made for the compounds 108 (ethylenethiourea); 155 (benalaxyl); 156 (clofentezine). Methods for the separate determination of compounds 133 (triadimefon) and 168 (triadimenol) were available. At the end of the year, after the JMPR and subsequent information from the FAO secretariat, the participants will be asked again to submit information for the 1991 meeting. A new version of the list of recommendations will be prepared in 1991. The Working Group took note of a paper from the work of Group E12 from the IDF describing methods for the determination of organophosphorus compounds in milk and milk products (document E-389, 1989). This work had no consequences for part 8 of the recommendations, since the original work used for this standard was already included in the references.

GOOD LABORATORY PRACTICE IN PESTICIDE RESIDUE ANALYSIS

3. Again the Working Group discussed Good Laboratory Practice (GLP) and Analytical Quality Assurance (AQA) in pesticide residue analysis. It was concluded that the existing part 7 of the recommendations was, in principle, still valid. On the one hand, the general and global description of good analytical practice in this recommendation was appreciated; on the other hand certain paragraphs of the recommendation could be up-dated and in some cases a more detailed description could be given. For the time being, and in expectancy of proposals from the participants for a redraft of part 7, the Working Group decided to advise that cross references to documents with respect to GLP and AQA should be included in part 8 (Recommendations for Methods of Analysis of Pesticide Residues) and in part 5 (Recommended Method of Sampling for the Determination of Pesticide Residues). The Working Group discussed an updated recommendation from the Organization Internationale de Métrologie Légale (OIML) entitled "Gas chromatographs for measuring pollution from pesticides and other toxic substances" which was originally already discussed several years ago. In the light of the up-date of part 7 of the recommendations this type of work could be used as references in a future update of part 7. A questionnaire will be sent out to the participants in order to make an inventory of similar material available now.

LIMITS OF DETERMINATION

4. Terbufos (167): though several years ago the limit of determination for terbufos was about 0.05 mg/kg, today under practical conditions 0.01 (*) mg/kg is possible. MRLs from 0.005(*) mg/kg are, from an analytical point of view, too low. Phorate (112): 0.05(*)mg/kg for milk is achievable in regulating analysis. Benalaxyl (155): In the absence of a suitable analytical method in the open literature, the Working Group was

unable to come to a conclusion of the proposed Limit of Determination. Carbendazim (072): MRL of 0.05(*) mg/kg for rapeseed seems too low, 0.1(*) is a more practical limit.

The above remarks have to be seen in the light of the Codex definitions of "limits of determination" and of "lower practical level" (ALINORM 89/24, Appendix III, para. 60) and the concept of "at or about the limit of determination", denoted by(*) after an MRL.

PESTICIDE RESIDUE ANALYTICAL METHODOLOGY

5. The Working Group discussed the use of Mass Spectrometry (MS) as a generally applicable detector in gas- and liquid chromatography. Today about 50% of the members of the Working Group are using MS for confirmation purposes, but it is recognized that MS techniques are used to a limited extent, on a world-wide basis, for routine residue determinations. Though the investments in equipment are rather high, it was the general opinion of the Working Group that within the coming years a break-through of MS methods is possible in the use of these system under daily circumstances. Attention to this item will, of course, be paid in future sessions of the Group.

ANALYTICAL METHODS WITH LOW RECOVERY

6. With reference to glyphosate (158), the Working Group discussed the use of residue-data, obtained with methods with recoveries lower than 70% and/or recoveries showing a large variation. Several years ago the ad-hoc Working Group on Sampling advised not to correct data for low recoveries and advised on the lay-out of the forms to report residue data from supervised trials, including space to report recovery data. The Working Group on Methods of Analysis again endorsed these views.

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APPENDIX IV

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

1. The above Working Group met under the Chairmanship of Ms. Salwa Dogheim (Egypt). The following countries and organizations participated in the deliberations:

Pr. Merad Boudia Rachida	Algeria
Eduardo A. Canale	Argentina
G.N. Hooper 1)	Australia
Ignatius T. Ndzinge	Botswana
Roberto Gonzalez	Chile
Clara Torres Marquett	Cuba
Salwa Mohamed Dogheim	Egypt
Macklad Mohamed Fathy	Egypt
S.K. Handa	India
Eghbal Taheri	Iran
Ahmed Ghanuni	Libya
Cheah Uan Boh	Malaysia
Hamirin Kifli	Malaysia
Chong Yong Kiong	Malaysia
Marco A. Martinez	Mexico
Mohamed Ameskane	Morocco
Mohamed Ghanmi	Morocco
Rufino Manuel Melo	Mozambique
H.J. de Vries	Netherlands
Dae Whan Oh	Republic of Korea
Yung Ho Chung	Republic of Korea
Woo Wun Suh	Republic of Korea
Nuansri Tayaputch	Thailand
Praneet Udomsitdhidseth	Thailand
Gobthong Thoophom	Thailand
E. Casadei	FAO
F.-W. Kopisch-Obuch	FAO
N. Rao Maturu	FAO
H. Galal Gorchev	WHO
J.L. Herrman	WHO

1) The Regional Chairman for the South West Pacific

2. The Working Group heard reports from the different countries on the current status of activities on pesticide residues in food and feed.

3. The delegation of Egypt brought to the attention of the Working Group that in many of the developing countries, there was no need to set up new laboratories but only keep the available equipment in top condition. Provision of spare parts for equipment is a problem faced by many developing countries. The delegate from Egypt informed the Working Group that in its view, it would be better to have one well equipped reference laboratory in the region rather than laboratories in each of the countries in the region. He also informed the Group about a regional Workshop on Good Agricultural Practice, that will be held in Cairo before the end of 1991.

4. The delegation of Iran informed the Working Group that Iran has a very modern laboratory with sufficient facilities in respect of pesticide residue analysis and is taking an active part in the GEMS programme.

5. The Working Group noted that India has a well coordinated research project on pesticide residues, with about 17 laboratories set up in different parts of the country to collect data on pesticide residues in food commodities. The laboratories are well equipped with needed instrumentation and personnel trained in pesticide residue analysis and have capabilities to provide training in analytical techniques. The major problem that the country faced is non availability of Analytical Standards.

6. Cuba has already established a pesticide registration activity and published every year an official list of permitted pesticides. Cuba has well equipped analytical laboratories and trained personnel for analysis of pesticide residues in food. It is presently establishing national tolerances for pesticide residues based on trials carried out in the country. Ninety national tolerances have been recognized, and once they are made official will be made available to all concerned. Cuba considers that it would be very useful and convenient to establish in the region a reference laboratory for the determination of pesticide residues.

7. Botswana exports much of its produce to the European Community and is presently working on a legislation on the control and use of pesticides with the assistance of FAO. The country lacks in trained personnel and good analytical laboratories for the determination of pesticide residues. The Committee noted that in addition, the country suffers from a lack of exchange of information from other countries.

8. Mozambique has a national legislation for registration of pesticides but lacks in manpower and good analytical laboratories for determination of pesticide residues.

9. The delegate from Chile informed the Working Group about an FAO Regional Workshop (Latin America and the Caribbean) on control of pesticides organized by the Regional Office of FAO with the assistance of EPA, the Rockefeller Foundation Organization of American States and the German Programme, GTZ. The Workshop discussed Good Agricultural Practices, registration procedures and MRLs for pesticides. The importance for meeting the tolerances established by the importing country in case of exports, was stressed. The advantages of setting up laboratories in each country in preference to a regional reference laboratory was also pointed out, in view of the problems to adequately transport food samples for analyses.

10. The delegate from Mexico informed the Group about the need to identify the specific requirements of each country and work on ways and means to seek assistance. Mexico has well equipped laboratories and trained personnel for determination of pesticide residues. However such facilities are lacking in other countries in the region. The need for middle term and long term planning was stressed.

11. The delegate from Malaysia informed the Committee that every effort should be made to establish national tolerances for pesticides and to make the information available to FAO.

12. The Regional Coordinator for the South West Pacific pointed out that it is very essential for the developing countries to collect and provide data to FAO on GAP prevailing in the countries so that MRLs for crops of importance could be established. Collection of such data may not be within the reach of many developing countries and a suggestion was made that developing countries should have residue trial data provided by the manufacturer or registrant of the pesticide as a pre-condition for registration of the pesticide in the country. Trials undertaken under local conditions and in accordance with the proposed use pattern should reflect the climate and other conditions prevailing in the country in which the crops are grown. Trials undertaken on a regional basis may also be appropriate.

13. Many of the developing countries are exporting countries and for promotion of international trade it is very essential that the Codex MRLs are accepted by the

importing countries which are mainly from the developed region of the world. Acceptance of Codex MRLs by the developed countries in the view of the Working Group would no doubt promote international trade from developing countries. Many a time, the control of infestation of crops in the developing countries would need treatment with a pesticide not registered in the industrialized countries.

14. The difficulties and problems involved in the operation and maintenance of pesticide laboratories in developing countries were pointed out and a stepwise approach was proposed by the Secretariat:

Step 1: Registration of pesticides
2: Setting up of a formulation control laboratory and training of laboratory staff
3: Training in safe and efficient use of pesticides
4: Setting up of a residue laboratory
5: Funding.

15. The Working Group made the following recommendations for consideration by the plenary:

i) Individual developing countries should take appropriate measures to establish an acceptable regulatory infrastructure to strengthen the existing laboratories and the analytical capabilities of the countries for determination of pesticide residues. Developing countries may consider setting up of regional laboratories which can be used for reference purposes and for training personnel for analysis of pesticides.

ii) Government should consider ways and means to sustain the laboratories and provide enough finances for purchase of chemicals and spare parts for equipment.

iii) The industry (GIFAP) should provide analytical standards to the developing countries on request or the developing countries should have provision of analytical standards by the manufacturer as a prerequisite for registration of the pesticide.

iv) Developing countries should generate data on GAP and provide the same to FAO and WHO. Since generation of such data may not be within the means of developing countries, the countries should consider having support from the manufacturer for generating such data as a prerequisite for registration of the pesticide.

v) Developing countries should consider establishment of regional networks as a means for exchange of information. Seminars and workshops for better understanding of GAP and acceptance of Codex MRLs should be organized.

vi) FAO and WHO should continue recognizing the need to provide pesticide residue analytical facilities as a part of their ongoing commitment to strengthening food control measures.

vii) The Codex Committee on Pesticide Residues should undertake a survey of developing countries to ascertain the pesticides in current use and identify the pesticide/commodity combinations of interest to developing countries.

viii) Many of the developing countries are exporting countries and for promotion of international trade, it is very essential that Codex MRLs are accepted by the importing industrialized countries.

Nomination of Regional Chairman

16. The Group elected the following officers from among the delegates.

Chairman: Ms. Salwa Dogheim (Egypt)
Regional Chairman (Asia): Dr. S.K. Handa (India)
Regional Chairman (Latin America and the Caribbean):
Dr. R. Gonzalez (Chile)
Regional Chairman (Africa): M.F. Macklad (Egypt).
Regional Chairman (South West Pacific): Dr. G.N. Hooper (Australia)

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APPENDIX V
PART I

Re-evaluation of Compounds Evaluated Prior to 1976

1. Compounds for which there appears to be no continued support for registration and should have CXLs removed.

019 Crufomate
028 Dioxathion
029 Diphenyl
036 Fenchlorphos

2. Compounds for which CXLs should be removed and Guidelines (GL) established.

001 Aldrin and Dieldrin
033 Endrin

3. Compounds for which there is no indication of data availability, but some use by countries has been reported. Additional information is required before CXL deletion can be recommended.

004 Bromophos
005 Bromophos-Ethyl
015 Chlormequat
035 Ethoxyquin
053 Mevinphos

4. Compounds for which there appears to be continued use and the manufacturers may be able to submit data.

020 2,4-D
040 Formothion
063 Pyrethrins
084 Dodine
086 Pirimifos-methyl

5. Compounds for which toxicological and residue data will be made available to the JMPR.

025 Dichlorvos	to be determined
026 Dicofol	1992
043 Heptachlor	1991
058 Parathion	to be determined
064 Quintozene	1993
065 Thiabendazole	1995
079 Amitrole	1993

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APPENDIX V
PART II

List of Compounds Scheduled for Evaluation or Re-evaluation by the 1990 and 1991 JMPR

1990 JMPR

Toxicological Evaluation	Residue Evaluation
Acephate	Acephate
Captan	Aldicarb
Chlorothalonil	Bendiocarb
Coumaphos	Benomyl
*Cyromazine	Captan
Ethion	Carbendazim
Folpet	Chlorothalonil
*Hexaconazole	Chlorpyrifos-methyl
Methacrifos	Clofentezine
Methamidophos	Cypermethrin
2-Phenylphenol and its sodium salt	*Cyromazine
*Profenofos	Deltamethrin
	Dimethoate
	Diquat
	Ethylenethiourea (ETU)
	Etrimfos
	Fenvalerate
	Flucythrinate
	Folpet
	*Hexaconazole
	Inorganic Bromide
	Metalaxyl
	Methacrifos
	Methamidophos
	Methomyl
	Methoprene
	Omethoate
	Paraquat
	2-phenylphenol
	Phorate
	Prochloraz
	Procymidone
	*Profenofos
	Thiophanate-methyl
	Tolylfluanid
	Triazophos
	Vamidothion
	Vinclozolin

* New Compound

1991 JMPR (tentative)

Toxicological Evaluation	Residue Evaluation
Azinphos-methyl	Azinphos-methyl
Azocyclotin	Azocyclotin
*Bentazone	*Bentazone
Bioresmethrin	Bioresmethrin
Butocarboxim	*Buprofezin
*Buprofezin	*Cadusafos (Ebufos)
*Cadusafos (Ebufos)	Carbosulfan
Chlorpyrifos-methyl	Chlorpyrifos-methyl
Cyhexatin	Cyhexatin
Daminozide	Daminozide
Disulfoton	Deltamethrin
Fentin	Dicloran
*Glufosinate-ammonium	Dinocap
Heptachlor	Disulfoton
*Hexythiazox	Etrimfos
Imazalil	Fentin
Monocrotophos	Flusilazole
Triazophos	*Glufosinate-ammonium
	Heptachlor
	*Hexythiazox
	Imazalil
	Methacrifos
	Monocrotophos
	Parathion
	Permethrin
	Propiconazole
	Triadimefon
	Triadimenol

1992 JMPR (tentative)

Toxicological Evaluation	Residue Evaluation
*Abamectin	*Abamectin
Aldicarb	Anilazine
Bifenthrin	Benalaxyl
*Cycloxydim	Bifenthrin
Dicofol	Bromopropylate
*Dithianon	Cyfluthrin
Fenbutatin oxide	*Cycloxydim
Iprodione	Demeton-S-methyl
Methidathio	Dicofol
*Myclobutanol	*Dithianon
*Penconazole	Fenbutatin oxide
Piperonyl butoxide	Methyl bromide
*Propham	*Myclobutanol
Pyrazophos	*Penconazole
Thiram	*Propham
Vinclozolin	Pyrazophos
	Thiram
	Vinclozolin

1993 JMPR (tentative)

Toxicological Evaluation	Residue Evaluation
Amitrole	Amitrole
Carbaryl	*Chlorpropham
*Chlorpropham	Diazinon
Diazinon	Dithiocarbamates
Diquat	Ethephon
Ethephon	Propineb
Ethylenethiourea (ETU)	Propylenethiourea (PTU)
Phosalone	Quintozene
Propineb	Tecnazene
Propylenethiourea (PTU)	
Quintozene	
Tecnazene	

1994 JMPR (tentative)

Toxicological Evaluation	Residue Evaluation
Bromopropylate	Dicloran
Chlorfenvinphos	Chlorfenvinphos
Dicloran	
Malathion	

1995 JMPR (tentative)

Toxicological Evaluation	Residue Evaluation
Thiabendazole	Thiabendazole

* new compound

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APPENDIX VI

Codex Maximum Limits for Pesticide Residues in Processed Foods

The CCPR has, on several occasions, considered the problem of residues of pesticides in processed foods. As a result of these considerations, in the 11th Session of the CCPR (11-18 June 1979) a paper prepared by the Codex and JMPR Secretariats (CX/PR 79/15-Add.1) on definition and classification of processed foods in relation to maximum residue limits was endorsed by the Committee. The paper suggested that it would be feasible and desirable to cover pesticide residues in "processed foods" under appropriate recommendations, either in general terms (e.g. by means of definitions and guidelines) or through the establishment of specific (or group) MRLs, for which an approach was suggested. The Committee recommended that follow-up should be given to the recommendations made by the Secretariat.

In its 12th Session (2-9 June 1980) the Committee agreed that, as a matter of principle, MRLs should not be established for processed foods unless there were pressing considerations for their establishment. It was noted that the proposal of the Secretariat reflected the approach followed by the JMPR over the years. In this respect the attention of the Committee was drawn to para 2.9 of the Report of the 1977 JMPR which addressed the question of MRLs for processed foods. It decided that the conclusions of the JMPR and those of the Secretariat should be used in developing guidelines on how processed foods should be handled in relation to pesticide residues. The delegation of Australia and the USA undertook to prepare such guidelines during the session, for consideration by the Committee.

The Committee agreed that the definition and classification of processed foods developed by the Secretariat should be introduced into the "Guide to Maximum Limits for Pesticide Residues".

With respect to the question of the guidelines mentioned above (i.e. under what conditions should specific MRLs be developed and how should processed foods not covered by specific MRLs be handled) the Committee considered the proposals of the USA and Australia.

The text of the guidelines adopted by the Committee was as follows:

a) For the purpose of establishing and enforcing maximum residue limits, raw agricultural commodities include, among other things, fresh fruits, whether or not they have been washed, waxed or otherwise treated in their unpeeled or natural form; vegetables in their raw or natural state, whether or not they have been stripped of their outer leaves, washed waxed or otherwise treated in their unpeeled form, cereal grains, nuts, eggs, raw whole milk, meats and similar agricultural produce. The Classification and Definition of Processed Foods is set out in Appendix I to document CX/PR 80/6.

b) Whilst the definition of raw agricultural commodities does not include foods that have been processed, fabricated or manufactured, e.g., by cooking, freezing, dehydrating or milling, maximum residue limits should also be recommended for some partly processed commodities such as milled cereal products and vegetables and animal fats, which are important items of international trade.

c) As processing and cooking generally remove or destroy a substantial amount of the residue present on the raw commodity, for most processed foods the MRL for the raw agricultural commodity applies also to the processed food derived from that specific commodity, provided residues have been removed to the extent possible during processing, and provided residues in the processed food do not exceed that in the equivalent weight of the raw agricultural commodity. In the

event residues are greater in the processed food than in the raw agricultural commodity from which it is derived, a separate MRL should be considered for the processed food.

d) In addition there are a number of situations where special consideration may be needed:

(i) when the processed food represents the sole or major food intake of infants and young children;

(ii) when toxic interaction or degradation products from pesticides are found in the food during or after processing;

(iii) when a significant residue results from a pesticide used in processing or storage practice (including impregnation of wrapping materials).

Since 1980, MRLs were proposed for several categories of processed foods, e.g. "secondary food commodities", which has undergone simple processing, and "derived edible products". The latter products are derived from primary food commodities using more complex processing methods, e.g. physical, chemical and biological processing. Examples are: vegetable oils, crude and refined; dried fish; dried fruits; products derived from grain, such as bran, flour, wholemeal, wholemeal bread, white bread; etcetera.

On an ad-hoc basis, MRLs can be established if necessary for other products, e.g. wines, for which provisions have already been made to incorporate them into the Classification.