

# codex alimentarius commission

FOOD AND AGRICULTURE  
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OF THE UNITED NATIONS

WORLD HEALTH  
ORGANIZATION

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX ALIMENTARIUS COMMISSION  
Eleventh Session, 1976

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

The Hague,  
3-8 March 1975

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
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REPORT OF THE EIGHTH SESSION OF THE  
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The Hague, 3-8 March 1975

INTRODUCTION

1. The Codex Committee on Pesticide Residues held its eighth session in The Hague, the Netherlands, from 3 to 8 March 1975. Mr. A.J. Pieters, Public Health Officer of the Ministry of Public Health and Environmental Hygiene, Foodstuffs Division, acted as Chairman. The session was attended by government delegates, experts, observers and advisers from the following 34 countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, Columbia, Czechoslovakia, Denmark, Egypt, Finland, France, Federal Republic of Germany, Ghana, Hungary, Ireland, Israel, Italy, Japan, Libyan Arab Republic, the Netherlands, New Zealand, Norway, Philippines, Poland, Senegal, South Africa (observer), Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, United States of America. The following International Organizations were also represented: Council of Europe, European Economic Community (EEC), International Federation of National Associations of Pesticide Manufacturers (GIFAP), International Organization for Standardization (ISO/TC 34 and SC5), European and Mediterranean Plant Protection Organization (EPPO) and the International Union of Pure and Applied Chemistry (IUPAC). A list of participants, including officers from FAO and WHO, is set out as Appendix I to this Report.

2. The session was opened by a speech of welcome by Dr. W.B. Gerritsen, Director-General of the Netherlands Ministry of Public Health. Dr. Gerritsen pointed out that pesticides could provide a useful contribution to food production but that, as with so many other human activities, a balance between benefit and risk should be maintained. After giving some examples of this thesis, he mentioned that the 1974 World Food Conference had stressed the importance of the availability of pesticides in connection with food production in certain parts of the world. The unbalanced situation in the world with regard to food supply could easily give rise to different attitudes concerning the acceptability of pesticide use and of the presence of pesticide residues in food. In Dr. Gerritsen's opinion it was one of the great achievements of the FAO/WHO Food Standards Programme that people from all over the world were brought together to consider each others' needs and wishes. Nations should then be prepared to accept that their decisions, when considering the balance between benefit and risk, were not identical to that of other nations. He expressed the hope that the forthcoming FAO Consultation on Pesticides in Agriculture and Public Health next April would bring about an improvement of the procedures in this field. He then wished the Committee success in its work.

ADOPTION OF THE AGENDA

3. The Committee adopted the agenda in the order as proposed.

APPOINTMENT OF RAPORTEURS

4. Mr. J.M. Lynes (UK) and Mr. G. Viel (France) were appointed to act as rapporteurs to the Committee.

## MATTERS OF INTEREST TO THE COMMITTEE

### Report of the Tenth Session of the Codex Alimentarius Commission

5. The Committee noted that, with the exception of a few points, the proposals made at its seventh session for maximum residue limits had been adopted by the Commission at its tenth session (ALINORM 74/44, July 1974, paras 144-168). It noted in particular that its support for and specific suggestions on the convening of a Joint FAO/WHO Pesticide Conference on pesticides had been endorsed by the Commission. The Committee was informed that a FAO Consultation would be held in April 1975 in Rome and that problems related to pesticide residues would be a separate item on the agenda.

### Report of the Eighth Session of the Codex Committee on Foods for Dietary Uses (ALINORM 76/26)

6. It was noted that at the above session it had been proposed by one delegation to amend the general provisions for pesticide residues in various baby foods by setting an upper limit of 0.01 mg/kg for all pesticide residues. The Committee took note of the opinion of the Commodity Committee that this was not a practical possibility at this stage.

### Procedure for the Acceptance of Codex Maximum Limits for Pesticide Residues

7. The acceptance procedure for maximum limits for pesticide residues as amended by the Codex Committee on General Principles was generally considered to be capable of solving a number of problems which had arisen under the previous procedure (see also para 28).

### Other Matters

8. A number of matters raised by governments in connection to this report but relating specifically to other agenda items were deferred for discussion later in the session. The Committee took note of a publication by the Council of Europe on "Pesticides in Agriculture" (3rd Ed.) which had been communicated to the session and which dealt with guidelines for international standardization of national requirements for pesticide registration. This was also an item on the agenda for the Ad Hoc Government Consultation on Pesticides in Agriculture and Public Health which had been convened by FAO for April 1975, partly as a result of discussions at the World Food Conference in November 1974. The Committee was presented with a reprint of an article which had appeared in the Swiss publication "Travaux de Chimie Alimentaire et d'Hygiène" (64, 459, 1973) dealing with the levels of exposure of the Swiss population to pesticide and mercury residues.

### Reports of the 1973 and 1974 Joint FAO/WHO Meeting on Pesticide Residues

9. Before dealing with the reports in detail, the Chairman drew the Committee's attention to the need for clear definitions agreed upon by the Joint Meeting and the Committee. As an example, he suggested that the definition of a "tolerance" should be brought into line. The glossary which appeared in the report of the 1969 Joint Meeting and which was partly revised in 1971 and amended at later meetings, should be republished. A definition of "guideline levels" should also be published.

10. As for the withdrawal of temporary ADIs because of the lack of toxicity data, especially for older compounds, the Chairman emphasized the need to consider the possibility of a collaborative effort to obtain the necessary data. To this effect he had prepared a list of compounds for which ADIs had been withdrawn or had not been established at all, as well as compounds for which a temporary ADI existed (Room document No. 4). The Israeli delegation offered to supply toxicological data on methyl bromide and ethylene dibromide as soon as these became available. The Canadian delegation mentioned that in Canada toxicological investigations were being carried out on hexachlorobenzene.

11. The meeting discussed extensively the way in which residue limits should be expressed. It was agreed that limits should be expressed to only one significant digit but at this stage it could not accept the proposal of the 1973 Joint Meeting that tolerances should be based on a geometrical progression (e.g. 0.1, 0.2, 0.5, 1, 2, 5, 10 mg/kg). Governments were requested to express their views on this matter.

The Committee decided to proceed as in the past, for the time being, i.e. to recommend maximum limits based on an approach which resembled more closely to an arithmetical progression (e.g. 0.2, 0.3, 0.4 or 3, 5, 7, 10 mg/kg).

12. The Committee suggested to the Joint Meeting that the Annex to their report should indicate clearly and not in code, the year in which further data on a compound should be made available. It was further suggested that the report should include complete lists of substances and residue limits instead of additions to previous lists only. The Committee also emphasized the need to include in the Annex all metabolites which were of significance in establishing tolerances for the compounds concerned.

13. The Netherlands delegation suggested that it would be desirable to indicate in the monographs the reasons why in some cases safety factors other than those which were normally applied had been used. The representative of WHO explained that the safety factor applied to derive "acceptable daily intakes" from "no effect levels" was in conformity with the agreed opinion of the experts in toxicology responsible for the evaluation.

14. The Belgian delegation expressed the view that in the absence of an ADI a guideline level should not be published.

15. The Committee agreed to refer the question as to whether higher priority should be given to the establishment of tolerances for pesticides in animal feed-stuffs to the Working Group on Priority Lists (see para 209).

16. In summarizing the discussion, the Chairman remarked that cooperation between the Committee and the Joint Meeting had improved by making it possible for the Committee to discuss the reports of the Joint Meeting. It was agreed that this new development should be followed at future meetings. He asked for government's comments on the report of the 1974 Joint Meeting which would again be placed on the agenda of the next session of this Committee.

#### CLASSIFICATION OF FOODS IN RELATION TO CODEX MAXIMUM LIMITS FOR PESTICIDE RESIDUES

17. The following documents were before the Committee: CX/PR 74/4 "Classification of Foods and Definition of Food Groups" based on the work of R.E. Duggan and M. B. Duggan (USA), CX/PR 75/2 "Classification of Foods for (a) presentation of Codex Maximum Limits for Pesticide Residues by Food and (b) the Establishment of Group Maximum Limits for Pesticide Residues", prepared by the Codex Secretariat and Room Document No. 5 "Classification of Foods" prepared by the Chairman of the Committee.

18. In introducing the subject, the Chairman pointed out that these papers raised two questions: (a) the desirability of establishing group tolerances as outlined in document CX/PR 74/4 and (b) the determination of such food groups and the decision as to which foods should be included in those groups. He noted that the existing Codex procedures allowed for both group and individual maximum residue limits. In his view there was a need to develop a uniform system of food classification, which would clearly define the foods to be included in the various group maximum limits. Also, he strongly recommended to the Secretariat to develop an automated system of recording maximum residue limits which would not only overcome errors but would assist in providing the necessary information required by the Committee and governments.

19. The Chairman of the Ad Hoc Working Group on the Relationship between the Committee and the Joint Meeting, Mr. K. Walker, informed the Committee that, from replies received from governments in response to the US questionnaire, it appeared that most governments preferred the approach allowing for both group and individual maximum residue limits. The Committee noted that the Joint Meeting had made considerable use of document CX/PR 74/4 especially as regards the use of acceptable terms to describe food commodities. The Joint Meeting had recommended maximum residue limits for groups of food commodities where data for many of the individual commodities in the group indicated that the conditions of use of the pesticide and resultant residue levels were generally similar.

20. The delegation of the USA informed the Committee that the US Environmental Protection Agency (EPA) was currently examining two systems of grouping and that a crop grouping plan might possibly be developed during 1975. He also pointed out that the approach described in document CX/PR 74/4 was also under consideration. The delegation of the Netherlands was of the opinion that further consideration should be given to the significance for Codex work of the groupings into "primary" and "secondary" crops as listed in document CX/PR 74/4. They also raised the question whether it was acceptable to determine a maximum residue limit for a whole group of foodstuffs from data of only certain members of the group. The Committee agreed that the use of food groups should be considered on its merits in each case.

21. The delegation of the USA drew the Committee's attention to the fact that the new Acceptance Procedure adopted by the Tenth Session of the Commission enabled governments which were not in a position to accept a group maximum residue limit, to specify the individual foods in the group for which they could accept the Codex maximum residue limit. The Committee agreed that there was a need to draw up a glossary of the definitions of foods grouped in an appropriate manner in order to ensure the use of a uniform nomenclature and that this need not necessarily be for the purpose of establishing group residue limits. The Secretariat agreed to explore the possibility of preparing such a glossary, noting however that this was a major task requiring the use of resources which were not available in the budget of the Joint FAO/WHO Food Standards Programme.

#### ESTIMATE OF POTENTIAL PESTICIDE RESIDUE INTAKE

22. In introducing the above paper (CX/PR 75/5) the representative of WHO outlined the method used in arriving at estimates of the "potential daily intake" of pesticide residues and stressed that these estimates were intended to assist the Joint Meeting and the Codex Committee on Pesticide Residues in arriving at Codex maximum residue limits which could be regarded as safe from the point of view of public health. In this respect it was to be noted that the "potential daily intake" was useful to indicate those pesticides where the observance of recommended Codex maximum limits was most unlikely to result in an intake of residue by the consumer exceeding the ADI. In such cases it would probably not be necessary to initiate studies to estimate the "actual" daily intake of the pesticide residue concerned based on total diet studies, market basket surveys and similar monitoring programmes. Where the "potential daily intake" significantly exceeded the ADI, a similar conclusion could be reached after further consideration of the assumptions made in calculating the figure for "potential daily intakes" in the light of the circumstances under which the pesticide was used or other factors. In some cases, however, further information concerning actual residue levels at the time of consumption was necessary.

23. The delegations of Australia and Israel expressed their appreciation to the representative of WHO for his clear explanation and presentation of the paper and stressed the need to carry out actual intake studies. The delegation of Australia emphasized that the concept of "potential daily intake" had only a limited application but it could help to illustrate that in the great majority of cases there was no danger of the consumer's intake of pesticide residues exceeding the ADI even when no allowance was made for the disappearance of pesticide residues during processing and/or cooking. The representative of WHO agreed in principle with the observation of the delegation of Australia and in reply to the delegation of Israel he indicated that several countries had submitted surveys of actual residues in food and that the results of these studies would be made available to the Committee. The Chairman thanked the delegation of Senegal for its offer to make available relevant information with respect to residues of pesticides and their effects on human health (see for this subject also the Swiss publication mentioned in para 8).

24. The delegation of the Netherlands pointed out that the concept of "potential daily intake" did not take into account the possibility that countries for which the calculation had been made might not, in fact, use the pesticides in question. The WHO representative pointed out that calculations were based on the assumption that all food consumed would contain residues at Codex tolerance levels and that the purpose of the exercise was merely to give additional assurance as to the safety of Codex recommendations. The Committee was informed that the Codex Committee on Food Additives had embarked on a similar approach of calculating "potential daily intakes", except that the calculations took into account all possible uses of an additive rather than only approved uses covered by Codex recommendations.

25. The Committee thanked WHO and noted the usefulness of the WHO calculations of "potential daily intakes" for pesticide residues whilst recognizing the limitations of such an approach. It requested WHO to continue its efforts to provide information so that recommendations for maximum residue limits could be compared with the figures for acceptable daily intakes published by the Joint Meeting.

CONSIDERATION OF CODEX MAXIMUM LIMITS FOR PESTICIDE RESIDUES

26. The Chairman drew attention to the fact that as a result of natural influences, good agricultural practice differed according to which country or region was involved. Consequently, it was essential for governments to supply relevant data and also to explain a particular agricultural practice was needed. In this way countries would be able to accept that agricultural practices elsewhere were justified and hence accept the consequences of these practices. The Chairman stressed that it was of the utmost importance to the Committee's work that all interested parties should submit available information on residue data to the Joint Meeting and also on compounds which were being reevaluated.

27. Because the possibilities for acceptance had been considerably enlarged since last year as a result of an agreement reached at the Tenth Session of the Codex Alimentarius Commission, the Chairman invited delegations to indicate in their comments on Codex recommendations whether they might eventually be able to give full, limited or target acceptance to the recommendation, and, in the case of non-acceptance, their reasons for not accepting the recommendation and also whether products complying with the Codex maximum limits would be allowed free distribution.

Statement by the Delegation of the USA

28. The delegation of the USA stated that following the adoption by the Tenth Session of the Codex Alimentarius Commission of new procedures for the acceptance of Codex maximum limits for pesticide residues, representatives of United States agencies concerned in these matters had held discussions on the procedure of the USA for acceptance of Codex maximum residue limits. Two basic tenets had emerged from these discussions:

(a) Before a proposed Codex maximum residue limit could be accepted by the USA it should be determined that the proposed tolerance fully complied with the requirements of national law and a regulation establishing such a tolerance should have been promulgated. The establishment of a tolerance under national law was a condition precedent to accepting a Codex tolerance; and

(b) At present, the USA would not operate on a so-called two tolerance concept; tolerances will apply equally to imported and domestic agricultural commodities.

The delegation of the USA recalled that at the Tenth Session of the Codex Alimentarius Commission, the US position was stated as one that would strive to give "full acceptance" to as many of the proposed tolerances recommended by the Commission for acceptance as possible. To accomplish this, where the proposed international tolerances differed from established US tolerances, each proposal would be reviewed from the standpoint of determining whether changes could be made in the US tolerance level. In all cases where possible, a regulation would be proposed under national law to make the US tolerances consistent with the Codex proposals. Where the USA could not accept a proposed international tolerance for reasons of good agricultural practice in the USA or for human health reasons, the reasons for non-acceptance, and the data upon which such a decision was based, would be fully set forth. The review of Codex proposals would not be limited only to those recommended international tolerances formally submitted to Member countries for acceptance. As an active participant in the work of this Codex Committee, the USA would review all proposed tolerance levels at the appropriate Steps in the Codex Procedure. Where the USA could not concur in a proposal, a statement of the reasons for non-concurrence would be submitted through established channels. The USA also supported the principle, recognized in the Codex Acceptance Procedures, which allows a country to accept a Codex tolerance, while prohibiting or restricting the use of the pesticide domestically. While tolerances established under national law in the USA applied to both imported and domestic food, the delegation believed it important to emphasize that in the USA the establishment of a tolerance for a pesticide chemical and the registration of the pesticide for use were two separate but related actions. In order to carry out this policy, new procedures to deal specifically with Codex work as it related to proposed pesticide residue limits had been established. It was expected that under these new procedures a proposal to adjust approximately 40 for carbaryl tolerances so that they would conform to the Codex recommended limits, would soon be published by the Environmental Protection Agency. This would be the first formal US action in response to submissions of international tolerances recommended at Step 9 by the Codex Alimentarius Commission. The delegation of the



USA also indicated that a decision had been made by the Environmental Protection Agency to assign additional personnel to work exclusively on the review of proposed Codex tolerance levels. In this manner it had affirmed that Codex work had high priority and that the review of the proposed residue limits at the various Steps in the Codex procedure would be expedited.

Working Procedure Adopted by the Committee for Agenda Item 7

29. The Committee agreed that, in the consideration of Codex maximum residue limits for pesticides, the same procedure as the previous year would be followed whereby all recommendations for each pesticide would be discussed together rather than according to the stage it had reached in the Codex Procedure. For this purpose a summary list of all Codex maximum residue limits had been prepared by the Secretariat, contained in document CX/PR 75/3 with a corrigendum to the English version. Addenda 1 and 2 to document CX/PR 75/3 contained the replies of the 1974 Joint Meeting to the various questions referred to it by the Seventh Session of the Committee. In addition a document (CX/PR 75/4) summarizing comments from governments, was available to the Committee. Decisions of the Committee regarding the advancement or otherwise of proposed maximum residue limits are given in Appendix II under the heading "Steps" with additional information in footnotes as required. The following paragraphs contain details of questions raised by delegations and the conclusions of the Committee regarding such questions.

ALDRIN AND DIELDRIN

Fruit (except Citrus fruit): 1.3

30. At its previous session, the Committee requested the Joint Meeting to specify the fruits to which the proposed tolerances of 0.1 mg/kg applied and also reiterated its request to governments to provide relevant information to the Joint Meeting. The Committee noted that only a few written comments had been received. The question was raised whether the Codex maximum residue limit had been based on residues following soil treatment or following application to foliage and whether aldrin and dieldrin were actually being used for the latter purpose. It was decided to hold the limit in abeyance at Step 7 pending reconsideration by the Joint Meeting. Governments were requested to provide residue data and to indicate the type of use to which the data referred.

AZINPHOS-METHYL

Fruit: 2.1; Apricots: 2.2; Grapes: 2.3; and Vegetables: 2.4

31. After some discussion, the Committee agreed that insufficient data was available to enable it to advance the proposed limits for the above crops in the Procedure. Governments were requested to indicate what further fruits and vegetables should be covered by specific maximum limits and to provide supporting residue data. The delegation of the Federal Republic of Germany considered that the limit for azinphos-methyl in fruit was too high. The inclusion of residues of azinphos-ethyl in the limit for azinphos-methyl was queried because no ADI so far had been established for the ethyl analogue. It was explained that there were commercial products containing both analogues and as the analytical methods determined them both, it was not feasible to exclude the ethyl analogue from the limit.

Pea vines: 2.12; Soybean vines: 2.13; Almond hulls: 2.18

32. The Committee requested governments to supply any information they might have about the importance of these animal feedstuffs in international trade.

BINAPACRYL

Cherries: 3.1

33. The Committee was informed that the 1974 Joint Meeting had proposed to lower this limit to 0.5 mg/kg. As the 1974 Evaluations were not available, the Committee decided to return the proposed tolerance to Step 6 and to ask governments for comments.

## BROMOPHOS

34. The delegation of the Netherlands remarked that possible residues of the metabolite 2,5-dichloro-4-bromophenol were not included in the proposed tolerances for bromophos and that no residue data on crops for this metabolite were presented in the 1972 Evaluations. Moreover, this compound was not only a metabolite of bromophos but also of other compounds such as bromophos-ethyl. In reply to the question of the Netherlands, the delegation of the United Kingdom remarked that the residues of this metabolite were minor in relation to total residue levels - about 15% (Joint Meeting 1972 Evaluations, page 27) - and that the metabolic pathway in plants and animals was similar. The Committee agreed to ask the Joint Meeting for clarification on the levels of residues of the metabolite and on its toxicity.

35. The delegation of Canada stated that no comments could be given on the proposed tolerances because in their opinion the presentation of the residue data in the 1972 Evaluations was not specific enough with respect to harvest intervals, concentrations and so on. The Joint Meeting was requested to consider these points. The delegation of Senegal requested that maximum residue limits be established on peanuts and tropical grains.

### Red currants: 4.9

36. The delegation of the Netherlands queried the proposed limit of 1 mg/kg for redcurrants since a tolerance of 0.5 mg/kg had been proposed for blackcurrants and gooseberries. The Joint Meeting was requested to review this item.

### Savoy cabbage: 4.13

37. The delegation of the Netherlands reserved their position because the proposed tolerance of 1 mg/kg seemed illogical in view of the proposed figure of 0.1 mg/kg for other cabbages. The UK delegation pointed out that the difference in leaf surface structure between savoy and other cabbages would result in a different level of retention.

### Sugarbeet (roots): 4.22

38. The delegation of the Netherlands pointed out that residues of about 2 mg/kg could occur in sugarbeet leaves. As there were no residue data given for milk and meat after oral administration to cattle, the Netherlands reserved their position concerning the proposed tolerance of 0.5 mg/kg in sugarbeet roots. The Joint Meeting was requested to consider residues in milk and meat of cattle.

### Milk (whole): 4.35

39. The delegation of the Netherlands reserved their position on the proposed figure of 0.02 mg/kg which did not allow for the presence of cattle in the stall during application of the pesticide. They proposed a figure of 0.05 mg/kg. The delegation of the United Kingdom remarked that the Joint Meeting did not consider the treatment of stalls while cows were still inside as being good agricultural practice.

### Brussels sprouts, Broad beans, Milk products

40. The delegation of the Netherlands asked for tolerances to be established for Brussels sprouts and broad beans because the use of bromophos on these crops was registered in the Netherlands. In addition to the tolerance for milk, the delegation of the Netherlands asked for a tolerance for milk products.

## BROMOPHOS-ETHYL

41. The delegation of the Netherlands made the same remark concerning the metabolite 2,5-dichloro-4-bromophenol as was made for bromophos. In addition it noted that according to the computer study "estimate of potential pesticide residue intake" (CX/PR 74/8) there would not even be a theoretical possibility that the level of intake might exceed the ADI. In the Netherlands this would not be the case because of the daily consumption figure of 100 g per caput of apples and pears. The representative of WHO indicated that a more detailed computer study was to be carried out in the near future when this compound was to be reviewed.

42. The delegation of the Federal Republic of Germany quoted their written comments and remarked that in their opinion a number of the proposed residue limits for this compound were too low. Further data would be provided.

### Meat of cattle: 5.6; Rapeseed oil: 5.13

43. According to their written comments, the delegation of the Federal Republic of Germany reserved their position on both items.

French beans: 5.20

44. There was a full discussion about the basis for the proposed maximum residue limit in French beans. It appeared that no residue data on French beans were presented for evaluation by the 1972 Joint Meeting but that residue data on kidney beans were available. This matter was resolved by replacing the item "French beans" by "kidney beans"; the tolerance proposal being unchanged.

Milk (whole): 5.25

45. The delegation of the Federal Republic of Germany reserved their position, making reference to their written comments.

Milk Products

46. The delegation of the Netherlands requested that a tolerance for milk products be established because bromophos-ethyl is used for direct application on cattle. The delegation of Australia informed the session that they were preparing data to support their tolerance proposal of 1 mg/kg for milk and milk products and that these data would be sent to the Joint Meeting.

CAPTAFOL

Apricots: 6.7 and Plums: 6.8

47. The Committee was informed through document CX/PR 75.3-Add.1 that new tolerances for these commodities had been recommended by the 1974 Joint Meeting. The Committee decided to amend the temporary tolerance to 15 mg/kg for apricots and 10 mg/kg for plums and to return them to Step 6. Governments were asked to inform the Joint Meeting on the use of the product after blossom.

CAPTAN

Apples: 7.1

48. The delegation of the Netherlands entered a reservation on the proposed level of 40 mg/kg, since according to supervised trials in the Netherlands, residues never exceeded 5 mg/kg. The delegation of the USA informed the Committee that data on residues of captan were available in the USA and agreed to send these data to the Joint Meeting. The Committee decided to return the proposed tolerances to Step 6 with a request to governments to send data to the Joint Meeting.

Cherries: 7.2

49. The delegation of the Federal Republic of Germany entered a reservation on this proposal. They pointed out that according to data obtained in the Federal Republic of Germany, a tolerance of 15 mg/kg would be sufficient. Data from the Netherlands had already been sent to the Joint Meeting. The Committee decided, however, that insufficient information was available to advance the proposed limit and requested, therefore, governments to send data on the level of residues to the Joint Meeting.

Pears: 7.3

50. The Committee decided to return the tolerance of 30 mg/kg in pears to Step 6 and to request governments to send residue data to the Joint Meeting.

Raisins: 7.17

51. The delegation of the USA informed the Committee that data on residues on raisins would be supplied to the Joint Meeting. The proposal was returned to Step 6.

CARBARYL

52. The delegations of the Netherlands and the Federal Republic of Germany enquired whether, in view of the extensive use of this pesticide, the intake by the consumer could theoretically exceed the ADI. It was pointed out that there was ample evidence that carbaryl was degraded into naphthol on washing, cooking and processing and that, therefore, this was unlikely to be the case. Total diet studies in the USA indicated that the ratio of actual intake to the ADI, estimated on the basis of residues found in food was of the order of 20 to 1. The Committee stressed the need for further studies on the disappearance of carbaryl and for results of total diet or similar studies so that WHO could take such residue data into consideration when evaluating the significance of their calculations of potential daily intake on carbaryl and thus give further assurances concerning the safety of the proposed Codex maximum limits.

Animal feedstuffs: 8.37

53. Some countries had expressed the view in their written comments that the limit of 100 mg/kg was unduly high. Furthermore, the delegation of the Netherlands was of the opinion that a limit should be recommended by the Joint Meeting for carbaryl in milk and milk products and questioned whether the limit in meat was sufficiently high to take into account residues in animal feedstuffs. It was explained that measurable residues in meat resulted from direct application to livestock but that residues in meat and milk resulting from intake in animal feedstuffs were close to the limit of determination. The Committee requested governments to provide residue data in milk and milk products on the basis of which the Joint Meeting could recommend a maximum residue limit.

CARBOPHENOTHON

54. The delegation of the Netherlands drew the attention of the representative of WHO to their written comment concerning the ADI in view of the re-evaluation of this compound proposed for 1976.

Lemons: 11.1

55. The delegation of Canada had pointed out in their written comments that the proposed residue level of 5 mg/kg was much higher than was compatible with good agricultural practice and that a limit of 1 mg/kg would suffice. The delegation of the USA was opposed to a reduction of the limit on lemons to 1 mg/kg in view of the findings of the Joint Meeting and of residue data available in that country on the basis of which a tolerance of 2 mg/kg had been established. It was agreed, on the proposal of the Israeli delegation, to set a group tolerance for Citrus fruit and to delete the limits for lemons, grapefruits, limes and oranges. The Committee decided to set a limit of 2 mg/kg for Citrus fruit. The Committee was informed that residues in the edible part of these fruits were near or at the limit of determination.

Apples: 11.9; Pears: 11.10

56. The Committee considered the Canadian proposal to increase the limits for these commodities to 0.8 mg/kg. It was agreed not to amend the proposed maximum limits since an adequate interval between application and harvest made it possible to set lower limits.

Milk and Milk products: 11.17-11.18

57. The delegation of the Netherlands was of the opinion that the proposed maximum limit for milk and milk products was too low. The delegation of Australia pointed out, and the Committee agreed, that the limit was applicable to commercial milk, which had been subjected to blending and bulking and that for Codex purposes residue levels of carbophenothion found in the milk of individual cows subjected to dipping or spraying in supervised trials should not be taken into consideration.

Potatoes: 11.19

58. The delegation of the Federal Republic of Germany drew the attention of the Committee to the limit set for potatoes at 0.02 mg/kg, which in its opinion was below the limit of determination of 0.05 mg/kg.

CHLORDANE

Proposed Amendments at Step 4 to Recommended Codex Maximum Residue Limits: 12.1-12.9

59. As the proposed amendments were generally acceptable to the Committee and as governments had not submitted comments in writing opposing the proposed amendments, the Committee decided to advance them to the Commission with the recommendation that Steps 6, 7 and 8 be omitted.

Various vegetables: 12.16-12.32

60. The delegation of Canada was of the opinion that a maximum residue limit of 0.1 mg/kg for the root vegetables at 12.16 to 12.21 would be more appropriate. It was pointed out that a multicomponent pesticide preparation such as chlordane was difficult to analyze at such levels. As the 1974 Joint Meeting had reconsidered chlordane, the Committee agreed that the maximum residue limits for items 12.16 to 12.32 should not be advanced until governments had had an opportunity to consult the Evaluations of the 1974 Joint Meeting.

Milk and Milk products: 12.33-12.34

61. Following a question as to whether the limit of 0.05 mg/kg would be sufficiently high to cover residue levels found in this commodity, the delegation of Australia informed the Committee that recent extensive monitoring in that country had not resulted in detectable amounts of chlordane in dairy products.

Meat: 12.35

62. The Committee agreed that further residue data were required to verify whether the limit of 0.05 mg/kg would accommodate chlordane residues found in meat moving in international commerce. Governments were invited to provide the necessary information.

Various Nuts and Fruits; Olives: 12.38-12.50

63. The Committee noted that the limits for the above items were based on residue data which often included negative readings and represented a limit at or about the limit of determination rounded off to 0.1 mg/kg. As the 1974 Joint Meeting had considered the question of analysis of chlordane and its residues, the Committee decided to await the publication of the 1974 Evaluations before taking further action.

Crude Soyabean, Linseed and Cottonseed Oils: 12.54-12.56

64. The delegation of the Netherlands was of the opinion that the limit of 0.5 mg/kg was too high as unprocessed oils were often used in animal feed. As no data were or would be likely to become available in the near future, the Committee took no action concerning the revision of these limits.

CHLORDIMEFORM

Pears: 13.1

65. In the opinion of the delegations of the Netherlands and the Federal Republic of Germany, residue data included in the Joint Meeting's Evaluations did not support a higher limit in pears than in apples. It was pointed out that a limit of 12 mg/kg had recently been set for chlordimeform on pears in the USA. Noting that the Joint Meeting had reviewed extensive data on chlordimeform, the Committee decided not to make any change to the limit for pears. The Committee was informed that the 1975 Joint Meeting would reconsider chlordimeform.

Prunes and Plums: 13.5

66. To avoid any misunderstanding regarding the meaning of the term plums and prunes, the Committee decided to delete the maximum limit for prunes as this commodity could be interpreted to be the fresh fruit as well as the dried fruit for which residue limits would be quite different.

Cottonseed oil (crude or refined): 13.10

67. The delegation of Israel questioned whether there was supporting data to establish the same limit for crude and refined cottonseed oils. It was pointed out that refining did not result in a loss of the compound.

CHLORFENVINPHOS

68. The delegation of the Netherlands asked WHO for the background of the use of a safety factor of 25 in estimating the ADI in view of the fact that no human studies were available for this compound. The representative of WHO referred to his earlier statement (see para 13) where he had explained the many considerations which were normally taken into account by the Joint Meeting when estimating a figure for an acceptable daily intake. Delegates were requested to direct such specific questions to the Joint Meeting.

69. Some editorial changes were made in the following items:

Peanuts (shelled): 14.21

amend to read: peanuts 0.05 on a shell-free basis.

Maize (grain): 14.22

amend to read: maize 0.05 in the kernels.

Rice (in the husk or polished): 14.25

In the 1974 Joint Meeting it was agreed that the limits should be: rice (in husk); rice (polished): 0.05 mg/kg. It was understood that the proposed tolerance of 0.05 mg/kg was at or about the limit of determination. Therefore, it was decided to delete the words "in the husk or polished".

CHLORMEQUAT

Wheat: 15.3

70. The delegation of Czechoslovakia pointed out that supervised field trials had been carried out in their country. The results indicated a lower limit in conformity with good agricultural practice in that country. A limit of 3 mg/kg might be acceptable for imported wheat.

Grapes: 15.5

71. The Committee was informed that chlormequat was used extensively as a systematic plant regulator to reduce laterals and to ensure heavier crops.

Milk and Milk products: 15.7-15.8

72. The delegation of the Netherlands was of the opinion that it would be more appropriate to refer to this limit as a "practical residue limit". It was pointed out that the Joint Meeting considered that residues resulting from the use of feed containing pesticide residues would more appropriately be covered by the term "tolerances". The Committee noted that the difference between a tolerance and a practical residue limit was not always clear but that the distinction might have a limited function.

CHLOROBENZILATE

Apples, Pears: 16.6 and 16.7

73. The delegation of Canada pointed out that the Evaluations of the Joint Meeting did not give information on a minimum pre-harvest interval. They informed the Committee that the Canadian maximum limit was based on a 7-day interval. The delegation of the USA informed the Committee that difficulties could be experienced in reconciling the present US tolerance of 5 mg/kg with the Codex proposal. The delegation of the Netherlands drew the Committee's attention to their written comments relating to the safety factor of 25 used by the Joint Meeting in arriving at the ADI for this pesticide.

Milk (whole): 16.10

74. The delegation of Poland was of the opinion that it would be more appropriate to refer to a "practical residue limit" rather than a "tolerance". It was pointed out that Citrus pulp containing residues was used as cattle feed and that this was a deliberate action which resulted in residues of chlorobenzilate in milk (see general comments at para 72 above).

CHLORPYRIPHOS

75. The delegation of the Netherlands expressed concern about the possibility of the intake of this pesticide exceeding the ADI, especially as chlorpyrifos was also used in food storage against insects such as cockroaches. The representative of WHO was of the opinion that there was a need to carry out studies on the rate of disappearance of chlorpyrifos. The delegation of Israel informed the Committee that a total diet study was currently being carried out in that country and that the preliminary results were reassuring. The Swiss delegation suggested that a general limit should be established for foods exposed to this pesticide in establishments handling foods in a similar way as had been done for dichlorvos. The US delegation informed the Committee that this matter was under consideration in their country but that, in view of the extremely low levels of residues found, it was not likely that maximum limits would be laid down to control this type of usage. The representative of WHO was of the opinion that this matter could be taken up in the FAO/WHO Food Monitoring Programme. The Committee requested governments to provide residue information on the basis of which the Committee could determine what further action should be taken.

Apples: 17.2

76. The delegation of the Netherlands considered that a limit of 0.5 mg/kg would be sufficient. The Israeli delegation pointed out that good agricultural practice in their country required higher limits.

Carrots: 17.7

77. The Netherlands delegation doubted whether this pesticide was used on carrots. The delegation of Israel confirmed that this was so and informed the Committee that preliminary results from current trials in Israel indicated that a limit of 0.3 mg/kg might be sufficient.

Peppers: 17.11

78. The delegation of Israel was of the opinion that a limit of 0.5 mg/kg would be needed and undertook to supply the Joint Meeting with the results of tests carried out in that country.

Meat of sheep and Poultry: 17.13-17.14

79. In the opinion of the Netherlands delegation and of the delegation of Canada a limit of 0.1 mg/kg would be sufficient for poultry. The Joint Meeting was requested to examine data on poultry from the USA and other sources.

Sugarbeet: 17.16

80. The delegation of the Netherlands proposed a limit of 0.01 mg/kg and at the suggestion of the Federal Republic of Germany, the Committee decided to change the limit to 0.05 which was considered to be at or about the limit of determination.

Citrus fruit

81. In reply to a question by the delegation of Israel, the representative of FAO informed the Committee that the 1974 Joint Meeting had recommended a maximum residue limit of 0.3 mg/kg for Citrus fruit.

Onion, Cauliflower, Red cabbage: 17.22-17.24

82. The delegation of Israel pointed out that data before the Joint Meeting were from application to soil only and that application by spray to the crop in accordance with good agricultural practice would lead to higher residue levels. The Joint Meeting was requested to evaluate any data supplied by the Israeli delegation.

Milk: 17.26

83. The delegation of the Netherlands was of the opinion that direct application to dairy cattle might result in higher residues. The Committee noted that the limit resulted from residues in feed and that further information was needed before any change to the limit could be considered.

COUMAPHOS

Poultry: 18.2

84. In the opinion of the Netherlands and Canadian delegations a limit of 0.5 mg/kg was adequate. It was pointed out that the analytical method did not give good reproducibility and that significant deviations were observed in the results of analyses. In the opinion of the delegations of the USA and Egypt a limit of 1 mg/kg was required. The representative of WHO pointed out that the potential daily intake study of the compound was not conclusive and results of actual residue intake studies and further toxicological information were needed.

2,4-D

85. In the opinion of several delegations the residue limits for this compound were too low. The Committee requested governments to provide further information so that this matter could be reconsidered by the Joint Meeting. In reply to a question by certain delegations, the representative of FAO informed the Committee that the 1974 Joint Meeting had recommended a maximum residue limit of 2 mg/kg on Citrus fruit, 0.2 mg/kg on potatoes, and 0.05 mg/kg on milk and milk products (at the limit of determination).

#### DDT

86. The Chairman reminded the Committee that at the Seventh Session it had been decided to return all limits under consideration to Step 6 of the Procedure with the request to producing and importing countries to provide any relevant data to the Joint Meeting in order to re-evaluate the proposals for maximum residue limits for DDT. However, no relevant information had been received by FAO for discussion by the 1974 Joint Meeting. It was pointed out that in recent years the use pattern for this compound had changed considerably and that, consequently, new and up-to-date data would have to be examined in order to be able to review the limits for DDT residues on the various commodities. At the same time it was realized that, generally speaking, those countries where DDT was still used - although in limited numbers of circumstances - were not in a position to provide the data required. The Committee discussed whether it would be appropriate to delete all the limits still under consideration, particularly since Codex recommendations, irrespective of their status in the Codex Acceptance Procedure, were frequently used as guidelines. The Committee decided to return the present limits to Step 6 and to remind governments that a re-evaluation of the proposals for this compound was necessary. Governments were also requested to send up-to-date information on the present use pattern of DDT together with appropriate residue data to the Joint Meeting so that this question could be reconsidered at a future session. After some discussion, the Committee agreed to request the Ad Hoc Government Consultation on Pesticides in Agriculture and Public Health to consider the problem of gathering information on the use pattern of DDT in developing countries and on resultant residue levels in food. The delegation of Senegal informed the Committee that all efforts were being made in that country to avoid the use of DDT on edible crops.

#### DIAZINON

##### Sweet corn: 22.20

87. At the Seventh Session of the Committee it had been agreed to request governments to provide data to substantiate the proposed limit of 0.7 mg/kg but no such data had been provided. The Committee accepted the limit for kernels and cob of sweet corn with husk removed.

##### Olives: 22.21 and Olive Oil: 22.22

88. The Committee took note of the reply of the 1974 Joint Meeting to the question raised at the previous session whether, in view of the high consumption of olives and olive oil in some Mediterranean countries, there could be an excessive intake of diazinon. The proposed limit was based on the maximum residues found from supervised trials following approved use. In this connection, the Committee noted the findings of a Swiss study (see para 8) which concluded that the intake of diazinon in the diet was not a cause for concern.

##### Milk and Milk Products: -

89. The delegation of the Netherlands was of the opinion that maximum residue limits should be established for these commodities. The Committee requested the Joint Meeting to examine any data submitted by Switzerland and other countries.

#### DICHLORVOS

90. The Committee agreed to limit the residue analysis to the parent compound since the quantity of the metabolite dichloroacetaldehyde, where present, was very small and represented an unnecessary complication. The Committee agreed that, as this amendment was not of a substantive nature, it should also be applied to those limits which were at Step 9 of the Procedure.

##### Vegetables (except lettuce): 25.4

91. The third round of government comments had provided the 1974 Joint Meeting with additional data and the Committee agreed with the Joint Meeting's conclusion that there was no need to act on the suggestion of the Seventh Session of the Committee to include proposals for limits in specific vegetable crops. The delegation of the Netherlands had reservations on the establishment of a limit for a group of products since residues of dichlorvos had been found only in a few crops.



Miscellaneous food: 25.20

92. The Committee noted that this limit was intended specifically to cover foods exposed to dichlorvos in establishments handling food and would, therefore, be mainly of interest to national authorities in their control of usage and would have no real rôle in facilitating international trade. Similar provisions might also apply to other compounds, e.g. chlorpyrifos (see para 75).

DICOFOL

93. The Netherlands delegation asked whether the Joint Meeting, at its last session, had been able to re-evaluate the toxicological data in the light of the remarks made in the written comments from that country presented to the previous session and in the light of the data which had been provided to the 1974 Joint Meeting. The representative of WHO pointed out that the ADI for dicofol did not have temporary status and that re-evaluation could only be started when WHO was specifically requested to do so. It was agreed to request WHO to re-evaluate the toxicological data on this compound.

94. The delegation of Israel, referring to document CX/PR 75/3-Add.2, item 8, pointed out that resistance of spider mites to dicofol was increasing.

95. The Committee was informed by document CX/PR 75/3-Add.1 of the changes made in existing proposals and some new proposals made at the 1974 Joint Meeting. As the full report of this Meeting was not yet available it was decided to give governments the opportunity to comment on the new proposals when the report became available.

DIMETHOATE

96. It was agreed that in order to take into account the use pattern of formothion in a number of countries, items 27.1-27.4 should include the note "from use of formothion and/or dimethoate".

97. The delegation of Israel considered that the expression "tree fruit (including Citrus fruit)" was inconsistent with the phrasing used in the case of other compounds. The Committee agreed that the term "tree fruit" included "Citrus fruit". However, as this item was already at Step 9 and as the Committee considered the omission of the words "(including Citrus fruit)" to be an editorial matter, the Secretariat was requested to make the necessary amendments in future publications of recommended Codex maximum residue limits.

98. The representative of WHO asked the Polish delegation for copies of the full reports mentioned in their written comments about loss of vitamin C in blackcurrants following treatment by dimethoate.

DIOXATHION

99. Replying to a question from the Federal Republic of Germany delegation, the representative of WHO informed the Committee that in their study the potential daily intake of this pesticide had been calculated to be between four to seven times the ADI. The attention of the Committee was drawn to the data on residues in food in commerce presented in the 1972 Evaluations in which it was indicated that the compound had a high rate of disappearance.

Stone fruit (Apricots, Cherries, Peaches, Plums, Prunes): 28.12-28.15

100. It was decided to indicate specific fruits and to delete prunes.

DIPHENYLAMINE

101. In the 1974 session of the Committee, WHO was requested to reconsider this compound in the light of the results of a long term study on mice. The representative of WHO informed the Committee that the present status of this compound created the same difficulties as with dicofol (see para 93). In addition, the representative of WHO made it clear that an evaluation of new toxicological data would not necessarily result in a change in the ADI established previously.

Apples: 30.1

102. The Netherlands reserved their position on this item pending review of toxicological data.

DIQUAT

Rice (polished): 31.10

103. The Japanese delegation, supported by the delegation of the Philippines, was of the opinion that limits should be set for unpolished rice (e.g. brown rice, milled rice). Governments were invited to send data to the Joint Meeting so that this matter could be fully considered.

Barley, Wheat: 31.15-31.17

104. The delegation of the Federal Republic of Germany pointed out that residue levels of 5 mg/kg on wheat might result in flour with residue levels up to 5 mg/kg, especially in whole meal flour. The delegation of Israel informed the Committee that studies on cattle fed on wheat containing diquat residues were being carried out in that country and that information would be sent to the Joint Meeting. The Committee agreed that flour should be made from untreated wheat and that, therefore, the residue limit of 0.2 mg/kg in flour was appropriate and that the limit of 5 mg/kg applied only to wheat and barley used as animal feed. The delegation of the Federal Republic of Germany was of the opinion that the residue limit for flour should be at or about the limit of determination.

ENDOSULFAN

105. Document CX/PR 75/3-Add.2 contained the results of the review by the 1974 Joint Meeting.

Fruit: 32.1

106. It was noted that although new data had been provided, the Joint Meeting had not been able to propose individual tolerances. The delegation of the Netherlands repeated their comment of previous years that a tolerance of 2 mg/kg for the whole range of fruit was unnecessary and unacceptable. The Belgian delegation joined in this reservation and indicated that results of trials on strawberries in Belgium would be made available to the Joint Meeting.

Vegetables: 32.2

107. The Committee was informed that this item had been amended by the 1974 Joint Meeting as follows: "vegetables (except carrots, potatoes, sweet potatoes, onions)" and that separate tolerances had been proposed for the vegetables named. The delegation of the Netherlands could not accept the tolerance for such a wide range of vegetables.

Tea (dry manufactured): 32.3

108. The Committee was informed that endosulfan residues remained in the leaves of the tea and that, therefore, no residues would be found in the beverage.

Cottonseed: 32.4, and Cottonseed oil: 32.5

109. It was noted that at the 1974 Joint Meeting, the proposals for these items had been changed to 1 mg/kg and 0.5 mg/kg, respectively. These levels were accepted by the Committee.

Carrots, Potatoes, Sweet Potatoes, Onions: 32.7-32.10

110. As the evaluations of the 1974 Joint Meeting were not available, these new proposals were not discussed.

Sorghum, Millet, Peanuts: -

111. The delegation of Senegal requested the Joint Meeting to propose tolerances for these items.

ENDRIN

Poultry: 33.11; Eggs: 33.12

112. New data had been evaluated by the 1974 Joint Meeting but had not resulted in a change in the previously proposed limits of 1 mg/kg (on a fat basis) and 0.2 mg/kg (on a shell-free basis) respectively (see CX/PR 75/3-Add.2). There was some discussion about the proposed levels and of a possible inconsistency between them. Questions were also raised as to the nature of the studies on which the proposals were based. It was decided to return both items to Step 6 and to request governments for further comments. In view of the new interpretation of a Practical Residue Limit by the Joint Meeting, it was decided to change both items into Tolerances.

ETHION

113. The delegation of the Netherlands expressed the view set out in their written comments that the safety factor of 10 used by WHO in estimating the ADI for this pesticide was too low. They reserved their position on all proposed tolerances.

Apples: 34.4

114. The delegation of the Federal Republic of Germany proposed a lower tolerance of 0.1 mg/kg in view of the toxicological data on this pesticide.

Lemons, Limes and Oranges: 34.5

115. On the proposal of the delegation of Israel these three items were grouped together as Citrus fruit.

Plums: 34.6

116. The delegation of Canada was of the opinion that 1 mg/kg should be a sufficient limit.

Prunes: -

117. This item was deleted as it was covered under plums.

Strawberries: 34.7

118. The delegation of Canada proposed a tolerance of 1 mg/kg because the 2 mg/kg proposal would be too high.

Pears: 34.10

119. On a proposal of the delegation of Canada, the limit of 1 mg/kg was changed into 2 mg/kg as it was considered more consistent with the residue data.

Beans: 34.18

120. In the opinion of the delegation of Canada, a figure of 1 mg/kg would be sufficient.

Melons: 34.19

121. It was brought to the attention of the Committee that no residue data were presented on this item in the evaluations of the Joint Meeting. The Joint Meeting was asked for clarification. The delegation of Canada had data to show that a figure of 0.2 mg/kg in whole cantaloupe melons was sufficient.

Edible Offal of Cattle: 34.30

122. It was decided to change the figure of 0.75 mg/kg to 1 mg/kg in view of the agreement to express proposals to one significant figure. The USA delegation asked for information on the difference between the proposals for meat of cattle and their edible offal and for meat of goats, etc. It was pointed out that only cattle were dipped in the pesticide and this resulted in higher residues.

FENCHLORFOS

Eggs: 36.2

123. The Committee accepted the recommendation of the 1973 Joint Meeting to change the limit of 0.05 mg/kg and noted that the maximum limit was no longer temporary.

Meat of Cattle, Goat and Sheep: 36.5-36.7

124. The delegation of Canada pointed out that the data presented to the Joint Meeting indicated a residue level of 7.5 mg/kg rather than 9 mg/kg as given in the Evaluations and reserved its position. The delegation of the United Kingdom stated that such a difference was not analytically significant.

Sorghum, Maize, Corn: -

125. The delegation of Senegal requested that limits be established for these commodities. The delegations of Australia and the United Kingdom indicated that they might be able to provide residue data for consideration by the Joint Meeting.

FENITROTHION

126. The representative of WHO informed the Committee that the compound had been assigned a definite ADI (0.005 mg/kg body-weight). As a result, the Committee agreed to change the temporary tolerances to tolerances. The Committee accepted the various

changes proposed by the 1974 Joint Meeting to items 37.5 to 37.10 and noted the Meeting's confirmation that the commodity under item 37.8 was "cocoa beans".

FENSULFOTHION

127. The Committee agreed that the residue should read "fensulfothion and its oxygen analogue and their sulfones, determined and expressed as fensulfothion".

Maize, Onions, Potatoes, Swede (Rutabaga) and Tomato: 38.1-38.5

128. The Canadian delegation made the point that the tolerances proposed for these items were 0.1 although data in the 1973 Evaluations did not show higher residues than 0.05 mg/kg. It was pointed out that there were considerable differences in the use of this pesticide according to good agricultural practices around the world and consequently a higher limit had been considered desirable. This was also more practical for analytical reasons.

Sugarbeet: 38.8

129. It was agreed that the tolerance for sugarbeet should be increased from 0.05 to 0.1 mg/kg to avoid analytical problems.

FENTHION

130. Several delegations were of the opinion that for toxicological reasons the proposed tolerances were not acceptable. According to the Danish delegation, the consumption of 15 grammes of apples a day containing the pesticide at the full tolerance level would result in an intake equal to the ADI. The Australian delegation was of the opinion that this compound was very useful against certain fruit flies, but that this use was only necessary on relatively few occasions. In their view such usage would never lead to a real intake exceeding the ADI. The representative of WHO drew attention to the fact that this compound would be reviewed by the Joint Meeting in 1975. The Committee decided to return the proposed tolerances to Step 6 and to ask governments to provide the Joint Meeting with data on toxicology, use pattern and residues.

FENTIN

131. In order to clarify the definition of the residue, the Committee adopted the following wording: "Residue: expressed as fentin hydroxide, excluding inorganic tin and di- and monophenyltin". It agreed to delete the words "on a soil-free basis" as this applied to all crops growing in soil, and in any event, was part of good analytical practice.

Coffee (roasted beans), Rice (hulled): 40.8-40.9

132. The Committee noted the clarification of the Joint Meeting that the limits applied to coffee (raw beans) and rice in the husk.

FORMOTHION

133. The Committee decided to amend the definition to "Residue determined as formothion". In all crops, except Citrus fruit, only dimethoate and its oxygen analogue had been found; consequently, the tolerances for blackcurrants (42.1) and strawberries (42.2) were withdrawn. A reference was made to dimethoate where tolerances result from the use of formothion and/or dimethoate.

HEPTACHLOR

Carrots: 43.9

134. The 1974 Joint Meeting had not received further data. On the basis of information already at its disposal, the proposed level had been judged a realistic value until further data were made available. The delegation of Switzerland considered a practical residue limit of 0.05 mg/kg sufficient. The Committee did not change the proposed limit.

Sugarbeet: 43.10

135. The Netherlands delegation and the delegation of France reserved their position on the proposed practical residue limit. They held the view that the figure was inconsistent with the practical residue limit for meat and milk. The delegation of France agreed to provide data to the Joint Meeting for further consideration.

#### HEXACHLOROBENZENE

136. At the Tenth Session of the Codex Alimentarius Commission the various limits for Hexachlorobenzene for adoption at Step 8 had been returned to Step 6.

137. In the absence of the representative of WHO, the FAO representative explained that the 1974 Joint Meeting had postponed a full evaluation of the compound but had allocated a value of 0.0006 mg/kg body-weight as a "conditional ADI".

#### Meat of Cattle, Sheep, Goat and Pig: 44.1-44.4; and Poultry: 44.5

138. The delegation of the Netherlands stated that it was not in agreement with the proposed limits as its own experience as an exporting country had shown that governments of the principal importing countries did not seem willing to accept or tolerate the proposed practical residue limits. It considered levels of 0.5 mg/kg more realistic. The delegations of the Federal Republic of Germany and France held similar views even if higher values were found at times. The delegation of the USA stated that in general the proposed levels were not found as a result of pesticide usage and that the major sources of HCB in the USA were pollution in the form of solid waste materials and effluent from factory stacks. The delegation of Australia pointed out that collaborative work on HCB had revealed a widespread of results. The delegation of Switzerland noted that proposals for tolerances should not be adjusted to accommodate analytical errors.

#### Eggs: 44.6

139. The question was raised whether the practical residue limits for eggs was consistent with the figure for poultry. Whereas on an arithmetical basis there seemed to be a discrepancy, the proposed limits appeared to be consistent with available residue data.

140. The Committee agreed to advance the proposals to Step 8 of the Procedure (see para 137).

#### LINDANE

#### Vegetables: 48.14

141. According to document CX/PR 75/3-Add.2, the 1974 Joint Meeting was not able to recommend any changes to the proposed general maximum residue limit because the available data were insufficient. Several delegations expressed the view that a group tolerance of 3 mg/kg for vegetables was not acceptable. The delegation of the Federal Republic of Germany mentioned that residue data in support of a tolerance of 2 mg/kg would be provided to the Joint Meeting in the near future. It was decided to return the tolerance of 3 mg/kg to Step 6. All governments were urgently requested to send residue data to the Joint Meeting.

#### Beans, dried: 48.15

142. It was made clear that the proposed tolerance was intended to cover post-harvest use. As the residue data available at the Joint Meeting were rather limited it was decided to return the proposed tolerance to Step 6. Governments were requested to submit residue data to the Joint Meeting.

#### Cocoa beans: -

143. The Committee took note of the residue data on cocoa beans provided by Ghana in Room Document No. 6 "Maximum Limits for Lindane Residues in Cocoa Beans". The Joint Meeting was requested to make a recommendation for a tolerance for cocoa beans.

#### MALATHION

#### Raw cereals: 49.1; Whole meal and flour from rye and wheat: 49.5

144. The delegation of the Federal Republic of Germany informed the Committee about the results of recent studies carried out in their country on this compound. During long-term storage of grain at low temperature and low humidity it had been noted that residues of malathion were highly persistent. Milling of such grain resulted in residues in whole meal higher than the tolerance of 2 mg/kg. As both items were already at Step 9, the delegation of the Federal Republic of Germany was requested to send their data to the Joint Meeting for their consideration as to whether it was necessary to act under the amendment procedure at the Commission.

Lettuce, Broccoli: 49.6-49.15; Turnip: 49.18; Apples: 49.19; Celery: 49.21

145. As the 1974 Joint Meeting had received no useful information, the proposals were not changed. The Canadian delegation informed the Committee that new data from supervised trials on lettuce and apples would be submitted to the Joint Meeting. Preliminary results indicated a possible tolerance of 3 mg/kg on lettuce and of 2 mg/kg on apples. The delegation of Egypt stated that their studies on tomatoes and cabbage showed that residues of malathion were more persistent than had previously been thought. All governments were requested to provide promptly residue data on supervised trials to the 1975 Joint Meeting.

Dried beans: 49.34; Lentils: 49.35

146. It was explained that the proposed tolerances were intended to cover post-harvest use. The Committee agreed that both items be advanced to Step 5 with a recommendation to the Commission that Steps 6, 7 and 8 be omitted.

MANCOZEB

Potatoes: 50.1

147. The Committee was informed that at the 1974 Joint Meeting the tolerance had been slightly modified and that additional proposals for a number of crops had been made. The re-evaluation of the toxicological data resulted in a temporary ADI of 0.005 mg/kg. Some delegations expressed their concern about ethylenethiourea, a metabolite of this pesticide. The Polish delegation could not accept the proposed limit of 1 mg/kg in view of the high consumption of potatoes in their country. It was decided to return the proposed tolerance of 0.05 mg/kg measured as the ethylenediamine moiety and 0.01 mg/kg measured as ethylenethiourea (at or about the limit of determination) in potatoes to Step 6 pending the publication of the 1974 Evaluations to enable governments to comment.

METHIDATHION

Prunes: -

148. It was decided to delete this item as it was covered under plums (51.8).

MONOCROTOPHOS

Apples: 54.1 and Pears: 54.2

149. The delegation of the Netherlands and the delegation of the Federal Republic of Germany were of the opinion that the proposed tolerances were too high in view of the toxicity of the compound and in the light of the high consumption of these in some countries. The delegation of Australia pointed out that the proposal only had a temporary status pending the completion of further supervised trials. These had now been carried out and the results indicated that the limit could probably be lowered to 0.5 mg/kg. The Committee decided to ask the Joint Meeting to reconsider these tolerances.

OMETHOATE

150. Several delegations were of the opinion that the proposed tolerances were too high in view of the toxicity and the persistence of the compound which was used on a large scale. The Committee agreed that there should be a study of omethoate, dimethoate and formothion together, taking into account metabolism and residues resulting from the use of each of these compounds. The Joint Meeting was asked to review these matters.

ORTHO-PHENYLPHENOL

Carrots: 56.3

151. The delegation of Switzerland asked for information concerning the need for the use of ortho-phenylphenol on carrots. The delegation of the Netherlands pointed out that the use of ortho-phenylphenol on carrots leads to discolouration and spoils the flavour of the crop. The Committee requested governments to supply information on the use of ortho-phenylphenol on carrots and was informed by the delegation of the USA that data would be made available.

Apples: 56.5

152. Data which had been sent to the Joint Meeting to support the proposal to increase this tolerance to 25 mg/kg had not yet been received by the Joint Meeting. Governments were requested to send further information to the Joint Meeting.

Prunes: -

153. It was decided to delete prunes from the list of proposals as they were covered under plums.

PARAQUAT

154. Several delegations were of the opinion that it was preferable, wherever possible, to use diquat instead of paraquat in a number of cases because there was a possibility of potential intake exceeding the ADI. The delegation of Australia pointed out that paraquat was necessary in rice culture.

PARATHION

Citrus fruit: 58.3

155. Until now no data had been sent to the Joint Meeting so that they could not reconsider the tolerance as requested. The delegation of Israel indicated that it would endeavour to collect and collate data on residues from Citrus growing areas where this pesticide is used, including those in the edible part of the fruit.

PARATHION-METHYL

Cole crops - Cucumber: 59.1-59.4; Vegetables: 59.6; Fruit: 59.7

156. The Committee noted that the Joint Meeting was not in a position to make proposals for specific fruit and vegetable items as was requested by the Committee because it lacked the necessary data. The delegation of Canada reserved their position because toxicological data were insufficient. The delegation of Egypt remarked that parathion-methyl was no longer used in their country due to the resistance developed to the compound.

157. The representative of WHO informed the Committee that their study of potential intake had produced figures indicating a possible intake exceeding the ADI in all five countries in the study. However, since it had already been the intention of the Joint Meeting to re-evaluate this compound in 1975, it was agreed to await the results of this re-evaluation. The Committee asked governments to provide data promptly on toxicology, metabolism and residues in order to meet the deadline for the 1975 Joint Meeting.

Rice

158. The delegation of the Philippines requested the Joint Meeting to propose a tolerance for rice. Governments were asked to provide data to the Joint Meeting.

PHOSALONE

Meat of Sheep

159. The Australian delegation indicated that they would submit data to the Joint Meeting with a view to their proposing a limit for meat of sheep.

PHOSPHAMIDON

Fruit, Vegetables: -

160. The Committee was informed through documents CX/PR 75/3-Add.1 and 2 that the 1974 Joint Meeting had withdrawn the items for fruit and vegetables and replaced them by proposals for specific commodities at the same tolerance level of 0.2 mg/kg (see Appendix II, items 61.13 through 61.25). These changes were considered to be amendments to the former proposals and it was agreed that these proposals should be regarded as being at Step 7 and that they be submitted to the Commission at Step 8.

Root vegetables (including potatoes): 61.22

161. It was noted that this item had not been withdrawn by the 1974 Joint Meeting.

PIPERONYL BUTOXIDE

162. It was recognized that this compound could become more important, for example through its use as a synergist for pesticides on stored products where there was increasing resistance of insects to certain pesticides. As piperonyl butoxide would be reviewed in 1975, it was decided to return the proposed tolerance to Step 6. Governments were requested to send data to the Joint Meeting.

Vegetables: 62.7

163. No data had been received in time for evaluation by the 1974 Joint Meeting.

QUINTOZENE

164. The Committee was informed that the 1973 Joint Meeting had broadened their recommendation to include hexachlorobenzene, pentachloroaniline, methyl pentachlorophenylsulfide and pentachlorobenzene as well as the parent compound. Several delegations declared their opposition to the inclusion of HCB in the tolerance for this pesticide because this could lead to the use of unsatisfactory preparations. The delegation of Australia pointed out that efforts were being made to eliminate HCB as an impurity in the manufacture of the compound. The Committee agreed to ask the Joint Meeting to clarify which metabolites and impurities were included in the proposed levels for specific crops.

Mushrooms: 64.1

165. The Committee was informed that the proposal for mushrooms had been withdrawn by the 1974 Joint Meeting.

TRICHLORFON

Bananas: 66.2

166. It was noted that according to the 1971 Evaluations, this item should read: "bananas, pulp".

Oranges: -

167. In the 1971 Evaluations this item was listed as "oranges, pulp", but in view of the proposed tolerance and the original working papers for that Joint Meeting, the item should be "oranges". The delegation of Israel proposed to change the item "oranges" into "Citrus fruit". This proposal was accepted by the Committee (see item 66.15).

Tomatoes: 66.23

168. In the opinion of the delegations of the Netherlands and Israel the proposed figure of 0.1 mg/kg was too low to cover residues resulting from the good agricultural practice in their countries. Supporting data would be provided to the Joint Meeting, which was requested to re-evaluate the tolerance.

Crops for which tolerance proposals are requested

169. The delegation of the Netherlands requested the Joint Meeting to propose tolerances for pears, currants, mushrooms, spinach, melons (under glass), cucumbers (under glass), and bell peppers (under glass). Any available residue data would be provided to the Joint Meeting. Other governments were asked to send any data in their possession.

TRICYCLOHEXYLTIN

170. The Committee noted that the 1973 Joint Meeting had recommended the use of the new common name for the compound, Cyhexatin, and had made the definition of the residue more specific.

Apples: 67.1; and Pears: 67.2

171. The delegation of the Netherlands proposed to reduce the tolerance for apples and pears to 1 mg/kg on the basis of a pre-harvest interval of four weeks. Several other delegations expressed the view that the proposed tolerance responded to conditions prevailing in their countries, including post-harvest treatment. The Committee agreed to retain the present limit.

Citrus fruit: 67.3

172. In reply to a question of the Netherlands delegation concerning the pre-harvest interval for Citrus fruit, it was stated that in a few countries a tolerance of 2 mg/kg was valid without such an interval.

Tea (dry, manufactured): 67.4

173. The delegation of Japan indicated that they would provide residue data on this item to the Joint Meeting.



Meat: 67.5; Milk: 67.6; and Milk Products: 67.7

174. The Committee agreed to ask the Joint Meeting for clarification as to why the residue limit for meat was established for the whole product whereas for milk and milk products it was on a fat basis. It was pointed out that the proposed figures for milk and milk products should read 0.05 mg/kg (on a fat basis) instead of 0.5 mg/kg.

PESTICIDE RESIDUE LIMITS RECOMMENDED BY THE 1973 JOINT MEETING ON PESTICIDE RESIDUES AT STEP 3

Compounds Nos. 70-78: Bromopropylate to Vamidothion

175. As the 1973 Evaluations had not been distributed in time for the present session governments had not had the opportunity to consider the recommendations of the Joint Meeting for these compounds. The Committee decided not to discuss the pesticide residue limits recommended by the 1973 Joint Meeting but to reconsider them at Step 4 along with government comments at its next session. A number of delegations reiterated their concern about the delays in the publication and distribution of Joint Meeting documents (see para 213 of this Report).

GENERAL REMARKS CONCERNING THE CONSIDERATION OF CODEX MAXIMUM LIMITS FOR PESTICIDES

(a) Definition of Practical Residue Limits

176. The Chairman of the Committee remarked on the desirability of ensuring consistency between the definitions used by the Joint Meeting and those adopted by the Committee (see para 9). In particular, there was discussion about the use of the terms "practical residue limit" and "tolerance". The Committee requested the Codex Secretariat to review the limits so far recommended in an endeavour to ensure consistency and report to the next session. The representative of FAO undertook to submit a paper about this subject prepared by the Codex Secretariat to the 1975 Joint Meeting for consideration.

(b) Pesticide residue limit in processed foods

177. The delegations of Israel and the United States called the Committee's attention to the question of pesticide residue tolerances for processed or semi-processed foods such as dried fruit and vegetables and fruit juice concentrates. The two delegations requested that the Joint Meeting should indicate specifically those instances where the suggested maximum residue limits applied to products other than the raw commodity and that this fact should be taken into account in the application of these maximum residue limits. The Committee recalled its decision concerning the application of Codex maximum limits, established for the raw commodity, also to apply to processed foods (see para 139, ALINORM 72/24A and para 196, ALINORM 74/24).

(c) The situation in developing countries

178. The delegation of Argentina drew the attention of the Committee to the position of the developing countries who were often not able to afford the necessary resources so as to keep up-to-date with the more sophisticated methods of analysis. On the one hand, the use of pesticides was encouraged by the necessity of increasing agricultural production and also by the promotion of pesticides by manufacturers. On the other hand, these same countries, by applying lower and lower tolerances on imported foodstuffs, could limit export from developing countries of these same agricultural products to the most important markets. The maximum limits should, therefore, not be established at a too low level although they should be satisfactory from the point of view of public health.

(d) Pesticide-free foods

179. The Egyptian delegation stressed the need to base maximum residue limits on well-founded scientific and toxicological evidence so as to safeguard the health of consumers and this consideration should override any economic or analytical consideration. He further stated that it should be recognized that pesticides were essential in modern agriculture. He considered that many claims made for pesticide-free foods were, in fact, misleading in this respect, also because of general environmental pollution.

(e) Evaluation of the written and oral comments

180. Closing the discussion on the maximum residue limits, the Chairman made some general remarks. He remarked that the work done by the Committee was to prepare proposals which would be generally acceptable to governments. It would not be a satisfactory situation if many proposals at Step 9 were returned to the Committee at Step 6 for review. If agreement could not always be reached, perhaps for legal reasons, it was still desirable to agree on reasonable proposals. The fact was that when a proposal reached Step 9 this implied that in general this proposal would be acceptable to most governments. Every country should now see to what extent the Codex proposals and the national legislation could be brought into line. Several delegations had done a great deal of work in preparing their written comments. These written comments were an important contribution to Codex work and although they were not published officially, they should be used to assist the FAO, WHO and Codex Secretariat in improving the existing proposals.

METHODS OF ANALYSIS FOR PESTICIDE RESIDUES

181. The Committee had before it the report of the Ad Hoc Working Group on Methods of Analysis (see Appendix IV to this Report). The Chairman of the Ad Hoc Working Group was Dr. Greve of the Netherlands delegation, who introduced the report and pointed out that the purpose of recommending methods was to assist governments in selecting a suitable method or methods to verify compliance with Codex maximum residue limits and as a guide when beginning a search through the literature for appropriate methods. He indicated that the Working Group intended to draft a questionnaire to assist in the compilation of a document on Good Analytical Practice. The Working Group might also seek to encourage collaborative studies on those methods for which further validation was required.

182. During the discussion of para 2.2 of the Working Group's Report, the following remarks were made:

(a) A list of suitable methods should also include tests to confirm the identity of pesticide residues;

(b) Ways and means should be sought to ensure the availability of reference samples of pesticides;

(c) The methods recommended should be appropriate to measure levels of pesticide residues covered by Codex limits and, conversely, due attention should be paid, when changing Codex maximum limits, to analytical capabilities;

(d) The methods recommended should be published methods which are readily available to analysts;

(e) When recommending methods, due consideration should be given to the general availability of instrumentation and expertise required.

183. The delegation of Egypt pointed out that there was a need for FAO to assist developing countries in the setting up of laboratories to carry out analyses on food. It was pointed out by the Secretariat that FAO was already active in this area and that problems of food legislation and control, especially the question of how food control in developing countries could be strengthened, would be discussed by the forthcoming session of the Coordinating Committee for Africa. The representative of IUPAC indicated that his Organization would be ready to assist analysts in developing countries in scientific problems relating to pesticide residue analysis. As regards the availability of the full text of the methods listed in para 2.2 of the Report of the Working Group to developing countries, the delegations of Canada and the USA offered to make available, on request, those published in the Canadian and US Analytical manuals and the FAO Secretariat remarked that the text of the great majority of methods could be obtained from the FAO Library.

184. As regards the inclusion of the determination of metabolites in the analytical method (see para 3 of the Report of the Working Group), the Committee agreed that the Joint Meeting should define the residue by listing all components and metabolites which were toxicologically significant and which needed to be determined. The Committee noted that in some instances information on these matters was still needed from the Joint Meeting.

185. The Committee noted that the Working Group had considered that maximum limits should be expressed to one significant digit (see para 11). The delegation of the Federal Republic of Germany was of the opinion that above 10 mg/kg the use of more than one digit would also be appropriate, e.g. 15 mg/kg.

186. The Committee concurred with the view of the Working Group concerning the expression of maximum limits in fatty foodstuffs (see para 4 of the Report of the Working Group), but made certain editorial changes as shown in Appendix II (see the various relevant items). As regards maximum limits in milk, the Committee requested governments to send comments on the proposal of the Working Group.

187. The Committee thanked members of the Working Group and appointed a new Ad Hoc Working Group to consider methods of analysis until the end of the next session. The following countries expressed their wish to serve on the Working Group: Belgium, Canada, Denmark, Egypt, the Federal Republic of Germany, Hungary, the Netherlands, the Philippines, Switzerland, the United Kingdom and the USA. Dr. P.A. Greve of the Netherlands was appointed Chairman. An invitation was also extended to IUPAC to attend the next session of the Working Group as well as to FAO (Secretariat of the Joint Meeting).

#### PRELIMINARY REPORT ON COLLABORATIVE STUDY ON RESIDUE ANALYSIS

188. The delegation of Australia informed the Committee that the collaborative study undertaken following the last session of the Committee would be completed in the near future. Response from governments had been excellent and around 10,000 to 15,000 analytical results were expected to be subjected to statistical analysis. Preliminary results confirmed that there was considerable intra- and inter-laboratory variation in the results obtained. This variation of results would eventually have to be considered in relation to the fact that a homogeneous sample had been analyzed using well established methods for residues of pesticides.

189. The Committee thanked the delegation of Australia and noted that the detailed results of the collaborative study would be made available at the next session.

#### SAMPLING FOODS FOR THE DETERMINATION OF PESTICIDE RESIDUES FOR REGULATORY PURPOSES

190. The Committee had before it a report of the Ad Hoc Working Group on Sampling (see Appendix V to this Report). The Chairman of the Ad Hoc Working Group, Dr. Greve of the Netherlands, introducing the report, pointed out that in developing guidelines on sampling for regulatory purposes the Working Group had adopted a practical approach to the taking of a representative sample of food passing in international trade.

191. The Committee agreed that, for the purpose of enforcement, the results of the analysis of the laboratory sample (as defined in the sampling procedure) should be compared with the Codex maximum residue limit. It also agreed that the Sampling method should be submitted to governments for comment at Step 3 of the Codex Procedure. As regards the question as to whether the sampling method should have an advisory or a mandatory character, the Committee decided to consider this point at its next session. It thanked the Working Group for presenting the report and the outgoing Chairman, Dr. Greve, and appointed another Working Group under the chairmanship of Mr. J.A.R. Bates of the United Kingdom, to consider sampling until the end of the next session. The following countries expressed their wish to serve on the Working Group: Canada, Denmark, Federal Republic of Germany, Hungary, the Netherlands, the United Kingdom and the U.S.A. The Secretariat of the Joint Meeting (FAO) was also invited to attend.

#### GOOD AGRICULTURAL PRACTICE (GAP) IN THE USE OF PESTICIDES

192. A document prepared by the Canadian delegation "Summary of Replies to the Questionnaire on Good Agricultural Practice in the Use of Pesticides for Some Important Selected Foods (CX/PR 75/10)" was presented to the Committee during the session. The first version of the paper had been presented at the Seventh Session of the Committee (issued, January 1974). The Committee had at that time agreed to extend the scope of the study by including an additional range of food crops, namely potatoes, maize, oil crops and pulses.

193. The delegation of Canada thanked the countries which had provided data for the second survey. It was pointed out that far fewer country replies had been received in response to the second questionnaire than to the first one. This could be considered to be an indication that the study need not be expanded any further at this stage but that, at regular intervals, revisions might be considered.

194. The Chairman and the Committee expressed their appreciation for the considerable amount of work done by the delegation of Canada in compiling the document which contained very useful information on one of the basic principles on which the work of the Committee and the Joint Meeting was based. The Chairman pointed out that the document included definitions adopted by the Joint Meeting, which differed from those used by the Codex Committee on Pesticide Residues and again stressed the need for consistency in this field.

195. The Committee agreed that the survey should be up-dated at three-year intervals and further agreed to request governments to make available relevant information before the next session on any further food crops to be covered by the survey. The representative of FAO also undertook to provide information on the use pattern of various pesticides in certain countries. The delegation of Canada undertook to produce a new GAP report for the Tenth Session of the Committee.

196. The representative of EPPO expressed the view that, in addition to the present valuable study, work should also be undertaken to collect data following officially recommended usages for important crops. Within the framework of the Working Party on Pesticides in Plant Protection, EPPO had undertaken a study on practices in the use of various compounds, e.g. mercurials and certain organochlorines. In addition to providing data on recommended use patterns, the study would also show those countries which had banned or restricted the use of certain compounds and would produce data on alternative pesticides used.

197. The EPPO representative further pointed out that the study indicated that the EPPO Region could be divided into three ecological sub-regions with common pest control practices and stated that, in his view, recommended usages should, in the first instance, be based on such sub-regions. At a later stage these areas might be expanded.

#### GUIDELINES FOR THE USE OF PESTICIDES

198. The Committee had before it a paper prepared by the Netherlands (CX/PR 75/8). In introducing the paper, the delegation of the Netherlands pointed out that the purpose of the paper was to state general guidelines for the use of pesticides in accordance with Good Agricultural Practice and that the guidelines were directed to those concerned with the proper use of pesticides and those concerned with authorization of such uses.

199. Certain delegations were of the opinion that the Guidelines should be enlarged to include more specific recommendations on the proper use of pesticides in agriculture. On this point it was stated that it was not the purpose of the Committee to provide more than general principles concerning the use of pesticides in the production and handling of food and that FAO was actively concerned with the problem of providing expert advice in specific regions of the world and in specific circumstances. Some delegations pointed out that the paper would be useful to administrators and others in developing countries and that advice on this matter was badly needed in these areas. It was also noted that WHO had drawn up guidelines for the safe use of pest control agents used in public health and that FAO had also published a model scheme for the registration of pesticides.

200. The Committee discussed the status of the document (CX/PR 75/8) and it was agreed that in order to ensure the collaboration of governments the step-procedure should be followed. Moreover, it was emphasized that according to the Codex General Principles, a document on guidelines for Codes of Practice was of an advisory nature. The title of the document was amended to read "Guidelines for Good Agricultural Practice in the Use of Pesticides". The Committee was of the opinion that the introductory remarks in the paper should be retained and that the purpose for which the guidelines were intended and the persons to whom they were directed should be included therein. It was decided to hold the paper at Step 2 of the Procedure and ask countries to submit their comments on document CX/PR 75/8 as soon as possible. The representative of WHO undertook to send comments. The delegation of the Netherlands undertook to revise the paper and present it to the next session of the Committee.

### ESTABLISHMENT OF PRIORITY LISTS

201. The Committee had before it the report of the Ad Hoc Working Group on Priority Lists (see Appendix III of this Report. The report was introduced by Dr. A.F.H. Besemer in the absence of Mr. E.R. Houghton, Chairman of the Group. It was pointed out that more basic information was available than some years ago. Especially the reports on Good Agricultural Practice 1973 and 1974, presented to the Committee by the Canadian delegation, provided valuable information together with submissions from various countries on new materials. To facilitate the identification of the compounds mentioned in the Priority Lists, some information was given on trade names, manufacturers and types of use. It was decided to include the chemical name of each compound in the above mentioned Appendix.

202. The Committee agreed to the proposed Priority Lists (1), (2) and (3) provided the following changes were made:

(a) Methamidophos was removed from List I and added in List II, as the delegation of the Federal Republic of Germany doubted whether the data on this compound would be available in time for the 1975 Joint Meeting.

(b) Cyanofenphos was removed from List II and added in List I.

All governments and other interested parties were strongly requested to send data speedily to the Joint Meeting but not later than July 31, 1975 on the compounds of Priority List I, and not later than June 30, 1976 on the compounds of Priority List II. The delegation of Israel promised to send residue data on sec-butylamine and on methomyl to the Joint Meeting.

203. The Chairman informed the Committee concerning a suggestion made by the IUPAC Pesticide Commission to publish these Priority Lists in open publications enabling Universities and research institutions to participate. The Secretariat was requested to take action on this matter. The Chairman of the IUPAC Pesticide Section, Dr. Abbott, indicated that the lists would be submitted for publication in the IUPAC Information Bulletin. The Committee agreed that it would be desirable if the American and the European societies of Toxicology, as well as Codex Contact Points, were also informed.

204. The delegation of Libya was of the opinion that undue attention was being paid to agricultural aspects and insufficient attention was given to matters relating to public health in establishing tolerances. The representative of WHO pointed out that the recommendations of the Joint Meeting were based not only on agricultural data but also on a toxicological evaluation of the compounds, as was shown in the Evaluations. The delegation of the United Kingdom added that all toxicological information had been fully discussed by the WHO Experts and that the Committee was more involved in aspects such as maximum residue limits which served for enforcement purposes.

205. The attention of the Committee was drawn to the use of antibiotic agents, which could give rise to the induction of resistance and also the phenomenon of cross-resistance in disease organisms affecting animals or humans. The possibility of sensitisation from penicillin was also mentioned. The Committee was informed that a meeting of a WHO Expert Working Group had been held in Bremen in 1973 which dealt, inter alia, with the use of antibiotics in feed and the consequence of such use for public health.

206. The delegation of Japan remarked that Blastocidin and Kazugamycin mentioned by the Working Group on Priorities were only used in agriculture, especially on rice, and were not used for human or veterinary purposes. Residues were not detected on rice using bio-assay methods (limit of detection 0.1 mg/kg). Data on short-term toxicological studies were available; long-term studies, as well as carcinogenic and teratogenic studies were underway. The FAO and the WHO representatives requested the Japanese delegation to provide all available data and indicated that if desirable, they would seek the advice of the Joint Meeting, which would report back to this Committee.

207. The Chairman asked the delegations what information could be expected on dithiocarbamates which were to be re-evaluated by the 1977 Joint Meeting. It was agreed that information was not only being requested on ethylene bis-dithiocarbamates but also on the dimethyl dithiocarbamates, including the similar compound, thiuram.

208. The delegation of the USA indicated that results of current work on these compounds and their metabolites would be made available. The delegation of the United Kingdom undertook to provide residue data from supervised trials on lettuce, including glass-house lettuce. The delegation of Canada indicated that results of fundamental kinetic studies, residue studies from field trials and disappearance during processing, would be provided. The delegation of Israel, speaking on behalf of IUPAC, informed the Committee that data on methodology of the parent compounds and metabolites and studies on the metabolic pathways would be made available. He also drew attention to a proposal of IUPAC to the Joint Meeting to establish specific tolerances for ETU. It was pointed out that the 1974 Joint Meeting had proposed tolerances for ethylene dithiocarbamate and its main metabolites measured as the ethylenediamine moiety, together with specific tolerances for ethylenethiourea.

209. The Committee agreed with the proposal of the Ad Hoc Working Group to delete the items acrylonitrile, allethrin, chlorpropylate, chlorthion, dimethrin and M.G.K.264 from any Priority List. The recommendation by the Ad Hoc Working Group that the Joint Meeting continue the present practice in respect to the consideration of pesticide residue limits in animal feed indicating where these may lead to residues on human food, was endorsed by the Committee.

210. The representative of GIFAP informed the Committee that all efforts were being made for industry to provide the data required by the Joint Meeting by the dates specified and that the Joint Meeting be informed well in advance where these data would not be forthcoming. Information on pesticides was being generated as required by the Joint Meeting even where no deadlines had been set. GIFAP would also cooperate with the Codex Committee on Pesticide Residues in an endeavour to furnish the information requested. As regards Group I on the Agenda of the 1975 Joint Meeting, information would be supplied to the Joint Meeting, as far as he was currently aware, on bromophos-ethyl, chlordimeform, disulfoton, demeton, fenthion, methidathion, monocrotophos and trichlorfon. Information may be available on coumaphos, parathion-methyl, piperonyl butoxide, pyrethrins and quinzofene, but no information would be available on omethoate. The representative of GIFAP also stated that the Codex Priority Lists and the Agenda of the 1975 Joint Meeting would be distributed immediately to GIFAP member bodies and companies.

211. The Committee expressed its concern about the data for the older compounds (the patents of which had expired) not being forthcoming to meet the requirements of the Joint Meeting (see also para 10).

212. The delegation of Israel undertook to provide information to the Joint Meeting on ethylene dibromide and methyl bromide.

213. The Committee thanked the Ad Hoc Working Group on Priorities and decided that a new Group be appointed to work until the end of the next session. The following countries expressed their wish to serve on the Ad Hoc Working Group: Israel, Canada, United Kingdom, Switzerland, USA, Australia and the Netherlands. EFPO and the Secretariat of the Joint Meeting were invited to participate and the Committee appointed Mr. E.R. Houghton as Chairman of the Working Group.

#### RELATIONSHIP BETWEEN THE CODEX COMMITTEE ON PESTICIDE RESIDUES AND THE JOINT FAO/WHO MEETING ON PESTICIDE RESIDUES

214. The Committee had before it a report of the Ad Hoc Working Group (see Appendix VI) which had met prior to the Eighth session to consider the results of a survey of the relationship between the FAO/WHO Joint Meeting on Pesticide Residues and the Codex Committee on Pesticide Residues. The Committee, in the main, agreed with the views of the Ad Hoc Working Group and adopted the following recommendations based on the Report of the Working Group:

(1) Fundamental changes need not be made in the structure of the relationship between the Joint Meeting on Pesticide Residues and the Codex Committee on Pesticide Residues.

(2) There is need for Member governments to contribute speedily much more information for the use both of the Joint Meeting and the Codex Committee on Pesticide Residues (see Point 4). It is suggested that through the existing Codex Contact Points this could be established within a participating government by the following:

- i. Establishment of a contact point specifically for pesticide matters who would correspond directly with the secretaries of the Joint Meeting; and
- ii. Establishment, within the government, of a group of pesticide experts charged with the task; utilization of national and international trade or scientific organizations as a source of information from manufacturers, formulators, etc., and continuity of representation at the Codex Committee on Pesticide Residues.

(3) The Directors-General of FAO and WHO be urged to give every possible consideration to the strengthening of the personnel, facilities and financial resources available to the Joint Expert Meeting on Pesticide Residues. They should also give consideration to the consequent strengthening of the Codex Secretariat.

(4) Revised guidelines should be immediately prepared and widely distributed clearly indicating the nature of the information which must be submitted to the Joint Meeting to enable it to carry out its responsibility properly.

(5) A Joint FAO/WHO Conference on Pesticides, as recommended by the Seventh Session of the Codex Committee on Pesticide Residues and the Third Joint FAO/WHO Conference on Food Additives and Contaminants, should be held as soon as possible. Pending the convening of this Conference, the recommendations above and below should be brought to the attention of the Ad Hoc Governmental Consultation on Pesticides in Agriculture and Public Health, to be held in Rome in April 1975.

(6) The FAO Committee of Experts on Pesticides in Agriculture should be convened regularly at intervals of no more than two years. The operations and needs of the Joint Meeting in relation to the work of the Codex Committee on Pesticide Residues should be considered as a matter of special concern and priority by the Joint FAO/WHO Conference on Pesticides and by the FAO Committee of Experts on Pesticides in Agriculture

(7) Consideration be given by FAO and WHO under rules established by FAO and WHO, to the utilization of experts, selected by the Organizations, but furnished by Member governments, to assist in the activities of the Joint Meeting on Pesticide Residues. If necessary this question should be put to the Governing Bodies of FAO and WHO.

(8) The Directors-General of FAO and WHO take note of the continuing delays being encountered in the timely receipt of the reports and Evaluations emanating from the Joint FAO/WHO Meeting of Experts on Pesticide Residues. They should review procedures for the publication of reports and Evaluations with a view to decreasing the length of time between meetings and the issuance of these publications. The monographs on individual compounds should be sufficiently extensive to support all recommendations. Amended procedures may require reference to the Governing Bodies.

#### OTHER BUSINESS

215. The Committee was informed that the venue of the Fourth International Congress on Pesticide Chemistry had been changed to Zurich in 1978.

216. The Representative of the Council of Europe informed the Committee that the Partial Agreement Member countries had issued a Third Edition of the publication "Agricultural Pesticides". A limited number of copies were made available to the Committee in English and French. He emphasized that its purpose was to encourage uniform registration procedures for pesticides. It was anticipated that work on an expanded Fourth Edition would be commenced in 1975.

217. The delegation of the Netherlands expressed their appreciation of the revised procedures for the acceptance of Codex limits of pesticide residues which should help remove the earlier difficulties encountered by certain countries.

218. The delegation of Spain reiterated the point made by the delegation of Argentina that the provision of Spanish at sessions of the Committee would be greatly appreciated by Spanish speaking countries and would, in their opinion, greatly enhance their participation in the work of the Committee.

#### DATE OF NEXT SESSION

219. The Committee noted that the next session would probably be held in March 1976.

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SUMMARY LIST OF CODEX MAXIMUM LIMITS FOR PESTICIDE RESIDUES

Explanatory Notes and Abbreviations

- T - Codex Tolerance (or Codex Maximum Residue Limit)
- TT - Temporary Codex Tolerance (or Temporary Codex Maximum Residue Limit)
- PRL - Practical Residue Limit
- TPRL - Temporary Practical Residue Limit
- GL - Guideline Level
- JMPR - Joint FAO/WHO Meeting on Pesticide Residues
- CCPR - Codex Committee on Pesticide Residues
- CAC - Codex Alimentarius Commission
- Step - "Step" in the Procedure for the Elaboration of Codex Maximum Limits for Pesticide Residues

Definition of Terms Used in this Document

Pesticide

For the purposes of the Codex Alimentarius, the term "pesticide" means any substance or mixture of substances intended for preventing or controlling any pest and includes any substance or mixture of substances intended for use as a plant-growth regulator, defoliant or dessicant. The term excludes fertilizers and antibiotics or other chemicals administered to animals for other purposes such as to stimulate their growth or to modify their reproductive behaviour.

Pesticide Residue

For the purposes of the Codex Alimentarius, a "pesticide residue" means any substance or substances in food for man or animals resulting from the use of a "pesticide". It also includes any specified derivatives, such as degradation and conversion products, metabolites and reaction products which are considered to be of toxicological significance.

Codex Tolerance or Codex Maximum Residue Limit

For the purposes of the Codex Alimentarius, a "Codex tolerance" or "Codex maximum residue limit" is the maximum concentration of a pesticide residue that is recommended by the Codex Alimentarius to be legally permitted in or on a food commodity. The concentration is expressed in parts by weight of pesticide residue per million parts by weight of the food or food commodity. In general, a Codex tolerance or Codex maximum residue limit refers to the residue resulting from the use of a pesticide under circumstances designed to protect the food or food commodity against pest attack, according to good agricultural practice (as defined). When a residue results from circumstances not designed to protect the food or food commodity in question against pest attack the maximum concentration recommended is designated as a "practical residue limit".

Guideline Levels

"Guideline levels" are included to assist administering authorities, even though ADIs have not been established for the individual products, or temporary ADIs established at an earlier date have been withdrawn. The levels recommended are those that need not be exceeded if good practices are followed. With regard to fumigants, they are intended to be applied at one of the stages indicated by footnotes in the knowledge that, when so applied, residues of unchanged fumigants in prepared foods eaten by the consumer would not exceed an amount close to the limit of determination by present analytical methods. (Note by the Secretariat: "Guideline Levels" are not taken up in the Codex Procedure for the Elaboration of maximum limits for pesticide residues until they are evaluated and found safe from a point of view of health by the JMPR).

1. ALDRIN and DIELDRIN (HHDN and HEOD)

Residue: Aldrin and dieldrin, singly or in combination, expressed as dieldrin.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> <sup>3/</sup>
1.1 Raw cereals (except rice in the husk)	0.02	PRL	9	-
1.2 Rice in the husk	0.02	T	9	-
1.3 Fruit (except Citrus fruit)	0.1	T	held at 7 1/	30
1.4 Citrus fruit	0.05	T	9	-
1.5 Milk	0.15 on a fat basis	PRL	9	-
1.6 Milk products				
1.7 Carcase meat	0.2 in the carcase fat	PRL	9	-
1.8 Eggs <sup>2/</sup>	0.1 on a shell-free basis	PRL	9	-
1.9 Asparagus	0.1	T	9	-
1.10 Brussels sprout	0.1	T	9	-
1.11 Cabbages	0.1	T	9	-
1.12 Carrot	0.1	PRL	9	-
1.13 Cauliflower	0.1	T	9	-
1.14 Broccoli				
1.15 Cucumber	0.1	T	9	-
1.16 Eggplant (aubergine)	0.1	T	9	-
1.17 Horse-radish	0.1	T	9	-
1.18 Lettuce	0.1	PRL	9	-
1.19 Onion	0.1	T	9	-
1.20 Parsnip	0.1	T	9	-
1.21 Peppers	0.1	T	9	-
1.22 Pimento	0.1	T	9	-
1.23 Potatoes	0.1	T	9	-
1.24 Radish	0.1	T	9	-
1.25 Radish tops	0.1	T	9	-

1/ Pending reconsideration by the Joint Meeting; Governments are requested to send data.

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

3/ Refers to this report, ie ALINORM 76/24.

2. AZINPHOS-METHYL

Residue: Azinphos-methyl.\*

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
2.1 Fruit	1	T	Returned to 6 4/	31
2.2 Apricots	4	T	Returned to 6 4/	
2.3 Grapes	4	T	Returned to 6 4/	
2.4 Vegetables	0.5	T	Returned to 6 4/	
2.5 Kiwi fruit	4 in the whole fruit	T	Advanced to 5	

4/ Third round of government comments.

\* Azinphos-methyl. Where azinphos-ethyl also occurs the total residue should not exceed the levels recommended for azinphos-methyl except in the case of tomatoes, where the total should not exceed 1 mg/kg.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>	
2.6 Kiwi fruit	0.4 in the edible part	T	} Advanced to 5		
2.7 Peaches	4	T			
2.8 Citrus fruit	2	T			
2.9 Melons	2	T			
2.10 Celery	2	T			
2.11 Alfalfa (green)	2	T			
2.12 Pea vines	2	T			32
2.13 Soybean vines	2	T			32
2.14 Broccoli	1	T			
2.15 Brussels sprout	1	T			
2.16 Potatoes	0.2	T			
2.17 Almonds	0.2 on a shell-free basis	T			
2.18 Almond hulls	10	T			32
2.19 Raw cereals	0.2	T			
2.20 Soybeans (dry)	0.2	T			
2.21 Cottonseed	0.2	T			
2.22 Sunflowerseed	0.2	T			

3. BINAPACRYL

Residue: Binapacryl

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
3.1 Cherries	0.5	T	Returned to 6 1/9	33
3.2 Peaches	1	T	9	
3.3 Apples	0.5	T	9	-
3.4 Grapes	0.5	T	9	-
3.5 Pears	0.5	T	9	-
3.6 Plums	0.3	T	9	-
3.7 Nectarines	0.3	T	9	-

1/ Returned for government comments. Changed from 1 to 0.5 on the proposal of the 1974 Joint Meeting.

4. BROMOPHOS

Residue: Bromophos

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>		
4.1 Olives	5	TT	} Advanced to 5	34, 35, 40		
4.2 Olive oil	5	TT				
4.3 Apples	2	TT				
4.4 Lamb's lettuce	2	TT				
4.5 Leeks	2	TT				
4.6 Radishes	2	TT				
4.7 Pears	1	TT				
4.8 Plums	1	TT				36
4.9 Red currants	1	TT				
4.10 Carrot	1	TT				
4.11 Celery	1	TT				
4.12 French bean	1	TT				
4.13 Savoy cabbage	1	TT				37
4.14 Spinach	1	TT				

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
4.15 Blackberries	0.5	TT	} 5 Advanced to	38
4.16 Black currants	0.5	TT		
4.17 Cherries	0.5	TT		
4.18 Gooseberries	0.5	TT		
4.19 Peaches	0.5	TT		
4.20 Strawberries	0.5	TT		
4.21 Lettuce	0.5	TT		
4.22 Sugarbeet (roots)	0.5	TT		
4.23 Carcase meat of sheep	0.5 in the carcase fat	TT		
4.24 Rapeseed	0.2	TT		
4.25 Rapeseed oil	0.2	TT		
4.26 Wheat	0.2 <sup>1/</sup>	TT		
4.27 Broccoli	0.1	TT		
4.28 Red cabbage	0.1	TT		
4.29 Cabbage	0.1	TT		
4.30 Cauliflower	0.1	TT		
4.31 Cucumber	0.1	TT		
4.32 Kohlrabi	0.1	TT		
4.33 Onions	0.1	TT		
4.34 Peas	0.1	TT		
4.35 Milk (whole)	0.02 <sup>2/</sup>	TT		39

<sup>1/</sup> Tolerance based on residues likely to be found at harvest.  
<sup>2/</sup> Level at or about the limit of determination.

5. BROMOPHOS-ETHYL

Residue: Bromophos-ethyl

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
5.1 Apples	2	TT	} 5 Advanced to	43
5.2 Pears	2	TT		
5.3 Plums	2	TT		
5.4 Carrot	2	TT		
5.5 Spinach	2	TT		
5.6 Carcase meat of cattle	2 in the carcase fat	TT		
5.7 Red currant	1	TT		
5.8 Brussels sprout	1	TT		
5.9 Sweet cherries	0.5	TT		
5.10 Gooseberries	0.5	TT		
5.11 Peaches	0.5	TT		
5.12 Celeriac	0.5	TT		
5.13 Rapeseed oil	0.5	TT		
5.14 Black currant	0.2	TT		
5.15 Lettuce	0.2	TT		
5.16 Strawberries	0.1	TT		
5.17 Rapeseed	0.1	TT		
5.18 Cabbage	0.1	TT		
5.19 Kohlrabi	0.05	TT		
5.20 Kidney bean	0.05	TT		
5.21 Beans (without pod)	0.02 <sup>3/</sup>	TT		
5.22 Cauliflower	0.02 <sup>3/</sup>	TT		
5.23 Onion	0.02 <sup>3/</sup>	TT		
5.24 Sugar beet	0.02 <sup>3/</sup>	TT		
5.25 Milk (whole)	0.02 <sup>3/</sup>	TT		44

<sup>3/</sup> Level at or about the limit of determination.

6. CAPTAFOL

Residue: Captafol

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>								
6.1 Peaches	15	TT	9	-								
6.2 Cherries (sour)	10	TT	9	-								
6.3 Cherries (sweet)	2	TT	9	-								
6.4 Tomato	5	TT	9	-								
6.5 Melons	2	TT	9	-								
6.6 Cucumber	2	TT	9	-								
6.7 Apricots	15	TT	Returned to 6 1/	47								
6.8 Plums	10	TT	Returned to 6 1/	47								
6.9 Cranberries	8	TT	}	-								
6.10 Leeks	8	TT		}	-							
6.11 Apples	5	TT			}	-						
6.12 Pears	5	TT				}	-					
6.13 Eggplant (Aubergine)	5	TT					}	-				
6.14 Pumpkin	2	TT						}	-			
6.15 Carrot	0.5	TT							}	-		
6.16 Onion	0.5 in the bulb	TT								}	-	
6.17 Potatoes	0.5	TT									}	-
6.18 Macadamia nut	0.1 on a shell-free basis	TT										}

1/ Returned for a further round of government comments. Changed from 0.5 to 15 and from 0.2 to 10 respectively on the recommendation of the 1973 JMPR.

7. CAPTAN

Residue: Captan

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>			
7.1 Apples	40	T	Returned to 6 2/ 3/	48			
7.2 Cherries	40	T	Returned to 6 2/ 3/	49			
7.3 Pears	30	T	Returned to 6 2/ 3/	50			
7.4 Apricots	20	T	9	-			
7.5 Citrus fruit	15	T	9	-			
7.6 Peaches	15	T	Advanced to 8	-			
7.7 Plums	15	T	9	-			
7.8 Rhubarb	15	T	9	-			
7.9 Tomato	15	T	9	-			
7.10 Cranberries	10	T	9	-			
7.11 Raspberries	10	T	Advanced to 8	-			
7.12 Strawberries	20	T	Advanced to 8	-			
7.13 Cucumber	10	T	9	-			
7.14 Lettuce	10	T	9	-			
7.15 Green bean	10	T	9	-			
7.16 Peppers	10	T	9	-			
7.17 Raisins	5	T	Returned to 6 4/	51			
7.18 Blueberries 5/	20	T	}	-			
7.19 Black currant	20	T		}	-		
7.20 Red currants	20	T			}	-	
7.21 Spinach	20	T				}	-
7.22 Endive	15	T					}

2/ Third round of government comments.

3/ Referred to the JMPR for consideration on the basis of data to be supplied by governments.

4/ Second round of government comments.

5/ Blueberry (or Huckleberry) includes the following varieties: V. corymbosum L., V. angustifolium Ait., V. ashei Reade, etc.

8. CARBARYL

Residue: Carbaryl

<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> 52
8.1 Rice in the husk	3	T	9	-
8.2 Apricots	10	T	9	-
8.3 Asparagus	10	T	9	-
8.4 Blackberries	10	T	9	-
8.5 Boysenberries	10	T	9	-
8.6 Leafy vegetables	10	T	9	-
8.7 Brassica	5	T	9	-
8.8 Nectarines	10	T	9	-
8.9 Nuts (whole in the shell)	10	T	9	-
8.10 Okra	10	T	9	-
8.11 Olives (unprocessed)	10	T	9	-
8.12 Peaches	10	T	9	-
8.13 Raspberries	10	T	9	-
8.14 Blueberries 1/	7	T	9	-
8.15 Citrus fruit	7	T	9	-
8.16 Strawberries	7	T	9	-
8.17 Apples	5	T	9	-
8.18 Bananas	5 in the pulp	T	9	-
8.19 Beans	5	T	9	-
8.20 Eggplant (aubergine)	5	T	9	-
8.21 Grapes	5	T	9	-
8.22 Peas (in the pod)	5	T	9	-
8.23 Peppers	5	T	9	-
8.24 Tomato	5	T	9	-
8.25 Cucumber	3	T	9	-
8.26 Melons, cantaloupe	3	T	9	-
8.27 Pumpkin	3	T	9	-
8.28 Squash	3	T	9	-
8.29 Cottonseed	1	T	9	-
8.30 Nuts (shelled)	1	T	9	-
8.31 Olives (processed)	1	T	9	-
8.32 Potato	0.2	T	9	-
8.33 Poultry skin	5	T	9	-
8.34 Poultry	0.5 in the total edible portions	T	9	-
8.35 Meat of cattle goat, sheep	0.2	T	9	-
8.36 Sweet corn	1 in the kernels	T	9	-
8.37 Animal feedstuffs (green): alfalfa, bean and pea vines, clover, corn forage, cow pea foliage, grasses, peanut hay, sorghum forage, soybean vine, sugar beet tops	100	T	9	53
8.38 Cherries	10	T	9	-
8.39 Plums	10	T	9	-
8.40 Sorghum	10 in the grain	T	9	-
8.41 Cranberries	7	T	9	-

Advanced to } 5

1/ Blueberry (or Huckleberry) includes the following varieties: *V. corymbosum* L., *V. angustifolium* Ait., *V. ashei* Reade, etc.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
8.42 Pears	5	T	} Advanced to 5	-
8.43 Beet roots	2	T		-
8.44 Carrot	2	T		-
8.45 Parsnip	2	T		-
8.46 Radish	2	T		-
8.47 Rutabagas	2	T		-
8.48 Peanuts (whole in the shell)	2	T		-
8.49 Cow pea	1	T		-
8.50 Soybean (dry)	1	T		-
8.51 Eggs 1/	0.5 on a shell-free basis	T		-
8.52 Sugar beet	0.2	T		-

1/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

9. CARBON DISULPHIDE

Residue: Carbon disulphide

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
9.1 Raw cereals 3/	10	GL	2/	
9.2 Milled cereal products 4/	2	GL	2/	
9.3 Bread and other cooked cereal products 5/	0.5	GL	2/	

10. CARBON TETRACHLORIDE

Residue: Carbon tetrachloride

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
10.1 Raw cereals 3/	50	GL	2/	
10.2 Milled cereal products 4/	10	GL	2/	
10.3 Bread and other cooked cereal products 5/	0.05	GL	2/	

2/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

3/ To apply at point of entry into a country and, in the case of cereal for milling, if product has been fully exposed to air for a period of at least 24 hours after fumigation and before sampling.

4/ To apply to milled cereal products to be subjected to baking or cooking.

5/ To apply at point of retail sale or when offered for consumption.

11. CARBOPHENOTHION

Residue: Total residue of carbophenothion, its sulphoxide and sulphone, together with their corresponding oxygen analogues, if present, expressed as carbophenothion.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>	
11.1 Citrus fruit	2	TT	} Advanced to 5	54	
11.2 Spinach	2	TT		55	
11.3 Carcase meat of cattle	1 ) in the carcase	TT			
11.4 Carcase meat of sheep		1 ) fat		TT	
11.4 Apricots	1	TT			
11.6 Nectarines	1	TT			
11.7 Peaches	1	TT			
11.8 Prunes	1	TT			
11.9 Apples	0.5	TT			56
11.10 Pears	0.5	TT			56
11.11 Broccoli	0.5	TT			
11.12 Brussels sprout	0.5	TT			
11.13 Cauliflower	0.5	TT			
11.14 Olive oil	0.2	TT			
11.15 Olives (unprocessed)	0.1	TT			
11.16 Sugar beet	0.1	TT			
11.17 Milk	) 0.1 on a fat basis	TT			57
11.18 Milk products					
11.19 Potato	0.02 1/	TT			58
11.20 Rapeseed	0.02 1/	TT			
11.21 Walnut	0.02 on a shell-free basis 1/	TT			
11.22 Pecans	0.02 on a shell-free basis 1/	TT			

1/ Level at or about the limit of determination.

12. CHLORDANE

Residue: Combined residues of cis- and trans-chlordane and, in the case of animal products, combined residues of cis- and trans-chlordane and "oxychlordane".

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Amendment</u> <u>submitted</u> <u>to CAC at</u> <u>Step 5 2/</u>	<u>Paragraph</u>
12.1 Raw cereals	0.1	TPRL	9	} Wheat, rye, oats, rice (polished), sorghum: 0.05 T Maize: 0.05 T 0.1 T Beans, peas: 0.02 T	59
12.2 Sweet corn	0.1	TT	9		
12.3 Popcorn	0.1	TT	9		
12.4 Pineapple	0.2	TT	9		
12.5 Pod vegetables	0.1 on a whole pod basis	TT	9		

2/ The Committee recommended that Steps 6, 7 and 8 be omitted.



<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Amendment</u> <u>submitted</u> <u>to CAC at</u> <u>Step 5 2/</u>	<u>Paragraph</u>
12.6 Tomato	0.1	TT	9	0.02 T	59
12.7 Peppers	0.1	TT	9	0.02 T	
12.8 Eggplant (aubergine)	0.1	TT	9	0.02 T	
12.9 Pimento	0.1	TT	9	0.02 T	
12.10 Cucumber	0.1	T	9		
12.11 Watermelon	0.1	T	9		60
12.12 Cantaloupe	0.1	T	9		
12.13 Pumpkin	0.1	T	9		
12.14 Squash	0.1	T	9		
12.15 Sugar beet	0.3	T	9		
12.16 Potatoes	0.3	T	Returned to 6	1/	
12.17 Sweet potato	0.3	T	Returned to 6	1/	
12.18 Rutabaga	0.3	T	Returned to 6	1/	
12.19 Turnip	0.3	T	Returned to 6	1/	
12.20 Parsnip	0.3	T	Returned to 6	1/	
12.21 Radish	0.3	T	Returned to 6	1/	
12.22 Asparagus	0.2	T	Returned to 6	1/	
12.23 Broccoli	0.2	T	Returned to 6	1/	
12.24 Brussels sprout	0.2	T	Returned to 6	1/	
12.25 Cabbage	0.2	T	Returned to 6	1/	
12.26 Celery	0.2	T	Returned to 6	1/	
12.27 Cauliflower	0.2	T	Returned to 6	1/	
12.28 Mustard greens	0.2	T	Returned to 6	1/	
12.29 Spinach	0.2	T	Returned to 6	1/	
12.30 Swiss chard	0.2	T	Returned to 6	1/	
12.31 Lettuce	0.2	T	Returned to 6	1/	
12.32 Collard (Colewort)	0.02	T	Returned to 6	1/	
12.33 Milk	0.5 on a fat basis	PRL	Advanced to 8	1/	-61
12.34 Milk products					
12.35 Carcase meat	0.05 in the carcase	PRL	Returned to 6		-62
12.36 Poultry	0.05 fat	PRL	Advanced to 8		
12.37 Eggs 3/	0.02 on a shell-free basis	PRL	Advanced to 8		
12.38 Almonds	0.1	T	Returned to 6		63
12.39 Bananas	0.1	T			
12.40 Figs	0.1	T			
12.41 Filberts	0.1	T			
12.42 Guavas	0.1	T			
12.43 Mangoes	0.1	T			
12.44 Olives	0.1	T			

1/ Returned for fourth round of government comments.

2/ The Committee recommended that Steps 6, 7 and 8 be omitted.

3/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>		<u>Step</u>	<u>Paragraph</u>
12.45 Passion fruit	0.1	T	Returned to	6	63
12.46 Papayas	0.1	T			
12.47 Pecans	0.1	T			
12.48 Pomegranates	0.1	T			
12.49 Strawberries	0.1	T			
12.50 Walnuts	0.1	T			
12.51 Citrus fruit	0.02	T	Advanced to	8	
12.52 Pome fruit	0.02	T			
12.53 Stone fruit	0.02	T			
12.54 Crude soya bean oil	0.5	T			
12.55 Crude linseed oil	0.5	T			
12.56 Crude cottonseed oil	0.1	T			
12.57 Edible cottonseed oil	0.02	T			
12.58 Edible soya bean oil	0.02	T			

13. CHLORDIMEFORM

Residue: Sum of chlordimeform and its metabolites determined as 4-chloro-o-toluidine and expressed as chlordimeform.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>		<u>Step</u>	<u>Paragraph</u>
13.1 Pears	5	)	Advanced to	8	65
13.2 Peaches	5	)			
13.3 Apples	3	)			
13.4 Grapes	3	)			
13.5 Plums	3	)			
13.6 Strawberries	3	)			
13.7 Cherries	2	) TT			
13.8 Citrus fruit	2	)			
13.9 Brassica	2	)			
13.10 Cottonseed oil (crude or refined)	2	)			
13.11 Cottonseed	2	)			
13.12 Beans	0.5	)			
13.13 Fat	0.5	)			
13.14 Meat of cattle	0.5	)			
13.15 Meat products of cattle	0.5	)			
13.16 Milk (whole)	0.05	)			
13.17 Milk products	0.5	)			

14. CHLORFENVINPHOS

Residue: Expressed as the sum of the alpha and beta isomers of chlorfenvinphos.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>		<u>Step</u>	<u>Paragraph</u>
14.1 Carrot	0.4	)	Advanced to	8	68
14.2 Celery	0.4	)			
14.3 Carcase meat	0.2 in the carcase fat)	)			
14.4 Milk	0.2 on a )	)			
14.5 Milk products	fat basis )	)			
14.6 Cauliflower	0.1	)			
14.7 Radish	0.1	) T			
14.8 Horseradish	0.1	)			
14.9 Tomato	0.1	)			
14.10 Brussels sprout	0.05	)			
14.11 Cabbage	0.05	)			
14.12 Broccoli	0.05	)			
14.13 Swede (Rutabaga)	0.05	)			

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
14.14 Turnip	0.05	)	} Advanced to 8	69
14.15 Potato	0.05	)		
14.16 Sweet potato	0.05	)		
14.17 Onion	0.05	)		
14.18 Leeks	0.05	)		
14.19 Eggplant (aubergine)	0.05	)		
14.20 Mushrooms	0.05	) T		
14.21 Peanuts	0.05 on a shell-free basis	)		
14.22 Maize	0.05 in the kernels	)		
14.23 Wheat	0.05	)		
14.24 Cottonseed	0.05	)		
14.25 Rice	0.05	)		

15. CHLORMEQUAT 1/

Residue: Chlormequat cation

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
15.1 Oat	5	)	} Advanced to 5	70
15.2 Rye	5	)		
15.3 Wheat	3	)		
15.4 Pears	3	) T		
15.5 Grapes	1	)		
15.6 Raisins and other dried vine fruits	1	)		
15.7 Milk	)	)		
15.8 Milk products	) 0.1 2/	)		
				72

1/ Usually as the chloride.

2/ Level at or about the limit of determination.

16. CHLOROBENZILATE

Residue: Chlorobenzilate

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
16.1 Citrus fruit	1	T	)	)
16.2 Melons	1	T	)	)
16.3 Cantaloupe	1	T	)	)
16.4 Almonds	0.2 on a shell-free basis	T	)	)
16.5 Walnuts	0.2 on a shell-free basis	T	)	)
16.6 Apples	2	T	Advanced to 8	73
16.7 Pears	2	T	Advanced to 8	73
16.8 Grapes	2	T	Advanced to 5	
16.9 Tomato	0.2	T	Advanced to 5	
16.10 Milk (whole)	0.05 3/	T	Advanced to 5	74

3/ Level at or about the limit of determination.

17. CHLORPYRIFOS

Residue: Chlorpyrifos

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
17.1 Carcase meat of cattle	2 in the )	)	)	
	carcase fat)	)	)	
17.2 Apples	1 )	)	)	76
17.3 Chinese cabbage	1 )	)	)	
17.4 Grapes	1 )	)	)	
17.5 Kale	1 )	)	)	
17.6 Pears	0.5 )	)	)	
17.7 Carrot	0.5 )	)	)	77
17.8 Tomato	0.5 )	)	)	
17.9 Beans	0.2 )	)	)	
17.10 Eggplant (aubergine)	0.2 )	)	)	
17.11 Peppers	0.2 )	)	)	78
17.12 Raspberries	0.2 )	)	)	
17.13 Carcase meat of sheep	0.2 in the )	Advanced to )	5	79
	carcase fat)	)	)	
17.14 Poultry	)	)	)	
17.15 Lettuce	0.1 )	)	)	
17.16 Sugar beet	0.05 <u>1/</u> )	)	)	80
17.17 Rice in the husk	0.1 )	)	)	81
17.18 Celery	0.05 )	)	)	
17.19 Cottonseed	0.05 )	)	)	
17.20 Cottonseed oil (crude)	0.05 )	)	)	
17.21 Mushrooms	0.05 )	)	)	82
17.22 Onion	0.05 )	)	)	82
17.23 Cauliflower	0.01 <u>2/</u> )	)	)	83
17.24 Red cabbage	0.01 <u>2/</u> )	)	)	
17.25 Potatoes	0.01 <u>2/</u> )	)	)	
17.26 Milk	0.01 on a )	)	)	83
	fat basis )	)	)	
	<u>2/</u>			

1/ Changed to 0.05 by the 1975 JMPR.

2/ Level at or about the limit of determination.

18. COUMAPHOS

Residue: Coumaphos and its oxygen analogue, expressed as coumaphos.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
18.1 Eggs <u>3/</u>	0.05 on a )	)	Advanced to 8	84
	shell-free )	)		
	basis )	)		
18.2 Poultry	1 in the )	TT )		
	carcase fat)	)		
18.3 Carcase meat of cattle	1 in )	)		
18.4 Carcase meat of sheep	0.5 the )	)		
18.5 Carcase meat of pigs	)	carcase)		
18.6 Carcase meat of goats	)	fat )		
18.7 Milk	0.5 on a )	)	Advanced to 5	
18.8 Milk products	fat basis )	)	Advanced to 5	

3/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

19. CRUFOMATE

Residue: Crumofate

<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
19.1 Milk (whole)	0.05	T	9	-
19.2 Meat	1	T	9	-

20. 2,4-D

Residue: 2,4-D

<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
20.1 Barley	0.02	} T	Returned to 6	85
20.2 Oat	0.02			
20.3 Rye	0.02			
20.4 Wheat	0.02			

21. DDT

Residue: DDT, DDD and DDE, singly or in any combination. 1/

<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>	
21.1 Milk	) 1.25 on a fat basis	PRL	9	-	
21.2 Milk products					
21.3 Eggs 2/		0.5 on a shell-free basis	PRL	9	-
21.4 Apples	) 7	} T	Returned to 6 3/	86	
21.5 Apricots					7
21.6 Pears					7
21.7 Peaches					7
21.8 Small fruits					7
21.9 Strawberries					1
21.10 Vegetables					7
21.11 Root vegetables					1
21.12 Carcase meat					7 in the carcase
21.13 Poultry					fat
21.14 Cherries	3.5				
21.15 Citrus fruit	3.5				
21.16 Plums	3.5				
21.17 Tropical fruit	3.5				
21.18 Nuts (shelled)	1				

1/ Codex maximum residue limits are subject to regular review. .

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

3/ Returned for fourth round of government comments and referred to the JMPR for reconsideration on the basis of data to be supplied by governments.

22. DIAZINON

Residue: Diazinon 4/

<u>Food</u>	<u>Limit</u> <u>(mg/kg)</u>	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
22.1 Fruit	0.5	T	9	
22.2 Peaches	0.7	T	9	-

4/ Residues decline rapidly during storage and shipment; the Codex maximum residue limits are based on residues likely to be found at harvest or slaughter.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
22.3 Citrus fruit	0.7	T	9	-
22.4 Vegetables	0.5	T	9	-
22.5 Carcase meat of cattle	0.7 } in the carcase fat	T	9	-
22.6 Carcase meat of sheep				
22.7 Carcase meat of pigs				
22.8 Leafy vegetables	0.7	T	9	-
22.9 Wheat	0.1	T	Advanced to 8	
22.10 Barley				
22.11 Rice (polished)				
22.12 Almonds	0.1 on a shell-free basis		Advanced to 8	
22.13 Walnuts	0.1 on a shell-free basis	T	Advanced to 8	
22.14 Filberts	0.1 on a shell-free basis	T	Advanced to 8	
22.15 Pecans	0.1 on a shell-free basis	T	Advanced to 8	
22.16 Peanuts	0.1 on a shell-free basis	T	Advanced to 8	
22.17 Cottonseed	0.1	T	Advanced to 8	
22.18 Safflowerseed	0.1	T	Advanced to 8	
22.19 Sunflowerseed	0.1	T	Advanced to 8	
22.20 Sweet corn	0.7 in the kernels - cobs with husk removed	T	Advanced to 8	87
22.21 Olives (unprocessed)	2	T	Advanced to 8	88
22.22 Olive oil	2	T	Advanced to 8	88

23. 1,2-DIBROMOETHANE (Syn.: Ethylene dibromide)

Residue: 1,2-dibromoethane

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
23.1 Raw cereals <u>1/</u>	20	)	)	
23.2 Milled cereal products <u>1/</u>	5	) GL	) <u>2/</u>	
23.3 Bread and other cooked cereal products <u>1/</u>	0.1	)	)	

1/ See footnotes 3/, 4/, and 5/ at items 9.1, 9.2 and 9.3, respectively.

2/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

24. 1,2-DICHLOROETHANE (Syn.: Ethylene dichloride)

Residue: 1,2-dichloroethane

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
24.1 Raw cereals <u>3/</u>	50	)	)	
24.2 Milled cereal products <u>3/</u>	10	) GL	) <u>4/</u>	
24.3 Bread and other cooked cereal products <u>3/</u>	0.1	)	)	

3/ See footnotes 2/, 3/ and 4/ at items 9.1, 9.2 and 9.3, respectively.

4/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

25. DICHLORVOS

Residue: Dichlorvos, 1/

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>	
25.1 Raw cereals	2	T	9	90	
25.2 Milled products from raw grain	0.5	T	9		
25.3 Fruit (e.g. apples, pears, peaches, strawberries, etc.)	0.1	T	9		
25.4 Vegetables (except lettuce)	0.5	)	Advanced to 8	91	
25.5 Cocoa beans	5	)	Advanced to 8		
25.6 Coffee beans (green)	2	)	}		
25.7 Soya bean	2	)			
25.8 Lentil	2	)			
25.9 Peanuts	2	)			
25.10 Mushrooms	0.5	)			
25.11 Lettuce	1	)			
25.12 Tomato	0.5	) T		9	92
25.13 Meat of cattle	)	)			
25.14 Meat of sheep	)	)			
25.15 Meat of goats	0.05	)			
25.16 Meat of pigs	)	)			
25.17 Poultry	0.05	)			
25.18 Eggs 2/	0.05 on a shell-free basis	)			
25.19 Milk (whole)	0.02	)			
25.20 Miscellaneous food items not otherwise specified (e.g. bread, cakes, cheese, cooked meat, etc.) 3/	0.1	)			

1/ Residues decline rapidly during storage and shipment. Codex maximum residue limits are based on residues likely to be found at harvest or slaughter.

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes such products as fresh whole eggs and whole egg pulp.

3/ The tolerance is intended to cover residues resulting from use of dichlorvos in storage in warehouses, shops, etc.

26. DICOFOL

Residue: dicofol

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
26.1 Fruit (except strawberries)	5	)	}	93,94,95
26.2 Vegetables (except cucumbers, gherkins, tomatoes)	5	)		
26.3 Hops (dried)	5	) T	Returned to 6 4/	
26.4 Tea (dry manufactured)	5	)		
26.5 Cucumber	2	T	3 5/	
26.6 Gherkin	2	T	3 5/	
26.7 Strawberries	1	T	3 5/	
26.8 Tomatoes	1	T	3 5/	

4/ Returned for third round of government comments and to the JMPR.

5/ These tolerances were recommended by the 1974 Joint Meeting the report of which will be distributed shortly.

27. DIMETHOATE

Residue: Dimethoate and its oxygen analogue, expressed as dimethoate, from the use of formothion and/or dimethoate

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> 96, 98
27.1 Tree fruit	2	)	)	97
27.2 Vegetables	2	)	) 9	-
27.3 Tomato	1	)	)	-
27.4 Peppers	1	) T	)	-
27.5 Strawberries	0.3	)	Advanced to 5	-
27.6 Black currants	2	)	Advanced to 5	-

28. DIOXATHION

Residue: cis- and trans- isomers of principal active ingredient, determined and expressed as sum of both.

<u>Food</u>	<u>Limit</u> (mg/kg) 1/	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> 99	
28.1 Citrus fruit	3	T	)		
28.2 Carcase meat of cattle	1 in the carcase fat	T	)		
28.3 Carcase meat of goat		)			
28.4 Carcase meat of sheep		) 9			
28.5 Carcase meat of pigs		)			
28.6 Apples	5	T	)		
28.7 Pears	5	T	)		
28.8 Quinces	5	T	)		
28.9 Grapes	2	T	)		
28.10 Milk	0.2 on a fat basis	T	Advanced to 5		
28.11 Milk products		)			
28.12 Apricots		0.1 2/	T	Advanced to 5	100
28.13 Cherries			)		
28.14 Peaches	)				
28.15 Plums	)				

1/ Tolerances are based on residues likely to be found at harvest or slaughter.

2/ Level at or about the limit of determination.

29. DIPHENYL

Residue: Diphenyl

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
29.1 Citrus fruit	110	T	9	-

30. DIPHENYLAMINE

Residue: Diphenylamine

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
30.1 Apples	10	T	Advanced to 8	105, 102

31. DIQUAT 3/

Residue: Diquat cation

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
31.1 Rice in the husk	5	T	Advanced to 8	
31.2 Rapeseed	2	T	Advanced to 8	

3/ As dichloride, dibromide or possibly other salts.



<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
31.3 Sorghum	2	)	)	
31.4 Peas	0.1	)	)	
31.5 Beans	0.5	)	Advanced to 5	
31.6 Sunflowerseed	0.5	)	Advanced to 5	
31.7 Onion	0.1	)	)	
31.8 Potato	0.2	)	Advanced to 5	
31.9 Maize	0.1	)	)	
31.10 Rice (polished)	0.2	)	Advanced to 5	103
31.11 Edible sesameseed oil	0.1	) T	Advanced to 8	
31.12 Edible rapeseed oil		)	)	
31.13 Edible sunflower seed oil		)	)	
31.14 Edible cottonseed oil		)	)	
31.15 Barley (as animal feed)	5	)	)	104
31.16 Poppyseed	5	)	)	
31.17 Wheat (as animal feed)	2	)	)	104
31.18 Cottonseed	1	)	)	
31.19 Wheat flour	0.2	)	Advanced to 5	104
31.20 Sugar beet	0.1	)	)	
31.21 Vegetables	0.05 1/	)	)	
31.22 Milk (whole)	0.01 1/	)	)	
31.23 Meat	0.05 1/	)	)	
31.24 Meat products		)	)	

1/ Level at or about the limit of determination.

32. ENDOSULFAN

Residue: Determined and expressed as total endosulfan A and B and endosulfan sulphate.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> 105, 111
32.1 Fruit	2	)	)	106
32.2 Vegetables (except carrots, potatoes, sweet, potatoes, onions)	2	)	)	107
32.3 Tea (dry manufactured)	30	) T	)	108
32.4 Cottonseed	1 3/	)	Advanced to 8	109
32.5 Cottonseed oil (crude)	0.5 3/	)	)	
32.6 Rice in the husk	0.1	)	)	
32.7 Carrots	0.2 4/	)	3 2/	110
32.8 Potatoes		)	)	
32.9 Sweet potatoes		)	)	
32.10 Onions		)	)	

2/ Recommended by the 1974 JMPR the report of which will be distributed shortly.

3/ Changed from 0.5 to 1 and 0.2 to 0.5 respectively on the proposal of the 1974 Joint Meeting.

4/ New recommendation made by the 1974 Joint Meeting.

33. ENDRIN

Residue: Combined residues of endrin and delta-keto-endrin.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
33.1 Cottonseed	0.1	)	)	
33.2 Cottonseed oil (crude)	0.1	)	)	
33.3 Cottonseed oil (edible)	0.02	)	)	
33.4 Apples	0.02	) T	Advanced to 8	
33.5 Wheat	0.02	)	)	
33.6 Barley	0.02	)	)	
33.7 Sorghum	0.02	)	)	
33.8 Rice (husked or polished)	0.02	)	)	
33.9 Milk	0.02 on a	PRL	)	
33.10 Milk products	fat basis	PRL	)	

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
33.11 Poultry	1 in the	T	Returned to 6	117
33.12 Eggs 1/	0.2 on a	T	Returned to 6	112
33.13 Sweet corn	0.02	T	Advanced to 8	

1/ The term "eggs" covers egg white plus egg yolk and, therefore, includes such products as fresh whole eggs and whole egg pulp.

34. ETHION

Residue: Determined as ethion and its oxygen analogue and expressed as ethion.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
34.1 Grapes	2 )		9	
34.2 Tea (dry manufactured)	5 )		9	
34.3 Carcase meat of cattle	2.5 in the )		9	
	carcase fat)			
34.4 Apples	2 )		)	114
34.5 Citrus fruit	2 )		)	115
34.6 Plums	2 )		)	116
34.7 Strawberries	2 )		)	117
34.8 Nectarines	1 )		)	118
34.9 Peaches	1 )		)	
34.10 Pears	2 )		)	119
34.11 Apricots	0.1 2/ )		)	
34.12 Cherries	0.1 2/ )		)	
34.13 Almonds	0.1 on a )		)	
34.14 Chestnuts	0.1 shell- )		)	
34.15 Filberts	0.1 free )		)	
34.16 Pecans	0.1 basis )		)	
34.17 Walnuts	0.1 2/ )		)	
34.18 Beans	2 )		)	120
34.19 Melons	2 )		)	121
34.20 Tomato	2 )		)	
34.21 Eggplant (aubergine)	1 )	T	) Advanced to 5	
34.22 Garlic	1 )		)	
34.23 Onion	1 )		)	
34.24 Pimento	1 )		)	
34.25 Peppers	1 )		)	
34.26 Cucumber	0.5 )		)	
34.27 Squash	0.5 )		)	
34.28 Cottonseed	0.5 )		)	
34.29 Maize	0.05 2/ in )		)	
	the kernel )		)	
34.30 Edible offal of cattle	1 )		)	122
34.31 Carcase meat of goats	0.2 2/ in )		)	
34.32 Carcase meat of horses	the )		)	
34.33 Carcase meat of pigs	carcase) )		)	
34.34 Carcase meat of sheep	fat )		)	
34.35 Poultry	)		)	
34.36 Edible offal of goats	0.2 2/ )		)	
34.37 Edible offal of horses	)		)	
34.38 Edible offal of pigs	)		)	
34.39 Edible offal of sheep	)		)	
34.40 Edible offal of poultry	)		)	
34.41 Milk	0.5 on a )		)	
34.42 Milk products	fat basis )		)	
	2/ )		)	

2/ Level at or about the limit of determination.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
34.43 Eggs <u>1/</u>	0.2 on a shell-free basis <u>2/</u>	T	Advanced to 5	

1/ The term "eggs" covers egg white plus egg yolk and, therefore, includes such products as fresh whole eggs and whole egg pulp.

2/ Level at or about the limit of determination.

35. ETHOXYQUIN

Residue: Ethoxyquin

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
35.1 Apples	3	T	9	-
35.2 Pears	3	T	9	-

36. FENCHLORFOS

Residue: To be determined as fenchlorfos and its oxygen analogue and expressed as fenchlorfos.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
36.1 Milk (whole)			withdrawn	-
36.2 Eggs <u>3/</u>	0.05 on a shell-free basis	T	Advanced to 8 <u>5/</u>	123
36.3 Milk	0.2 on a fat basis	T	Advanced to 5	
36.4 Milk products				
36.5 Carcase meat of cattle	10 in the carcass fat	T	Advanced to 5	124
36.6 Carcase meat of goat				
36.7 Carcase meat of sheep				
36.8 Carcase meat of pigs	2 in the carcass fat	T	Advanced to 5	124
36.9 Poultry	0.01 <u>4/</u>	T	Advanced to 5	124

3/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

4/ Level at or about the limit of determination.

5/ Changed by the 1975 CCPR on the recommendation of the 1974 JMPR from 0.03 to 0.05.

37. FENITROTHION

Residue: Fenitrothion

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
37.1 Apples	0.5	)	)	)
37.2 Cherries	0.5	)	)	)
37.3 Grapes	0.5	)	)	)
37.4 Lettuce	0.5	) T	)	)
37.5 Dried green tea	0.5	)	)	)
37.6 Red cabbage	0.5	)	) Advanced to 8	) 126
37.7 Tomato	0.5	)	)	)
37.8 Cocoa beans	0.1	)	)	)
37.9 Meat or fat of meat	0.05 <u>6/</u>	PRL	)	)
37.10 Milk	0.05 on a fat basis	PRL	)	)
37.11 Milk products				

6/

6/ Level at or about the limit of determination.

38. FENSULFOTHION

Residue: Fensulfothion, and its oxygen analogue, and their sulphones, determined and expressed as fensulfothion.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
				127
38.1 Maize (grain), including kernels of field corn and popcorn	0.1	)	)	)
38.2 Onion	0.1	)	)	)
38.3 Potato	0.1	)	)	) 128
38.4 Swede (Rutabaga)	0.1 (roots)	)	)	)
38.5 Tomato	0.1	)	)	)
38.6 Peanuts	0.5 1/ on a shell-free ) basis )	)	)	)
38.7 Pineapple	0.05 1/ )	T	)	)
38.8 Sugar beet	0.1 2/ )	)	)	)
38.9 Bananas	0.02 1/ )	)	)	)
38.10 Carcase meat of cattle	0.02 1/ in )	)	)	)
38.11 Carcase meat of goats	carcase )	)	)	)
38.12 Carcase meat of sheep	fat )	)	)	)
38.13 Edible offal of cattle	0.02 1/ )	)	)	)
38.14 Edible offal of goats	)	)	)	)
38.15 Edible offal of sheep	)	)	)	)

1/ Level at or about the limit of determination.

2/ Changed to this limit from 0.05 mg/kg by the 1975 CCPR.

39. FENTHION

Residue: Fenthion and its major metabolites, determined separately or together and expressed as fenthion.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
				130
39.1 Apples	2	)	)	)
39.2 Peaches	2	)	)	)
39.3 Cherries	2	)	)	)
39.4 Lettuce	2	)	)	)
39.5 Carcase meat	2 in the ) carcase fat)	)	)	)
39.6 Cabbage	1	) TT	)	)
39.7 Cauliflower	1	)	)	)
39.8 Olives	1	)	)	)
39.9 Olive oil	1	)	)	)
39.10 Grapes	0.5	)	)	)
39.11 Citrus fruit 3/	0.5	)	)	)
39.12 Peas	0.5	)	)	)
39.13 Squash	0.2	)	)	)
39.14 Wheat	0.1	)	)	)
39.15 Rice	0.1	)	)	)
39.16 Milk products	0.1 on a ) fat basis )	)	)	)
39.18 Milk (whole)	0.05	)	)	)

3/ Changed from "oranges" to "Citrus fruit" by the 1974 CCPR.

40. FENTIN

Residue: Expressed as fentin hydroxide, excluding inorganic tin and di- and mono-phenyl tin

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
40.1 Celery	1	)	)	131
40.2 Sugar beet	0.2	)	)	
40.3 Carrot	0.2	)	)	
40.4 Potatoes	0.1	)	)	
40.5 Celeriac	0.1	)	)	
40.6 Peanuts	0.05 on a shell-free basis 1/	) T	)	Advanced to 8
40.7 Cocoa beans	0.1 1/	)	)	Advanced to 5 ) 132
40.8 Coffee (raw beans)	0.1 T/	)	)	)
40.9 Rice (in the husk)	0.1 T/	)	)	)
40.10 Pecans	0.05 on a shell-free basis 1/	)	)	)

1/ Level at or about the limit of determination.

41. FOLPET

Residue: Folpet

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
41.1 Currants (fresh)	30	)	)	
41.2 Grapes	25	)	)	
41.3 Blueberries 2/	25	)	)	
41.4 Cherries	15	)	) 9	
41.5 Raspberries	15	)	)	
41.6 Apples	10	)	)	
41.7 Citrus fruit	10	)	)	
41.8 Strawberries	20	) T	)	Advanced to 8
41.9 Tomato	5	)	)	
41.10 Cantaloupe	2	)	)	
41.11 Cucumber	2	)	)	
41.12 Onion	2	)	) 9	
41.13 Water melon	2	)	)	
41.14 Lettuce	15	)	)	Advanced to 5

2/ Blueberry (or Huckleberry) includes the following varieties: *V. corymbosum* L., *V. angustifolium* Ait., *V. ashei* Reade, etc.

42. FORMOTHION

Residue: Determined as formothion (see also 27 dimethoate).

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
42.1 Citrus fruit	0.2	T	Advanced to 5	133

43. HEPTACHLOR

Residue: Combined residues of heptachlor and its epoxide, expressed as heptachlor.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
43.1 Raw cereals	0.02	PRL	9	-
43.2 Vegetables	0.05	PRL	9	-
43.3 Milk	0.15 on a fat basis	PRL	9	
43.4 Milk products				
43.5 Carcase meat	0.2 in the carcass fat	PRL	9	
43.6 Carrot	0.2	PRL	Advanced to 8	134
43.7 Sugar beet	0.05	PRL	Returned to 6	135
43.8 Pineapple	0.01 in the total edible portion	T	)	
43.9 Tomato	0.02	PRL	)	
43.10 Cottonseed	0.02	PRL	)	
43.11 Soya bean	0.02	PRL	)	
43.12 Edible soya bean oil	0.02	PRL	) 9	
43.13 Eggs 1/	0.05 on a shell-free basis	PRL	)	
43.14 Crude soya bean oil	0.5	PRL	)	
43.15 Citrus fruit	0.01	PRL	)	
43.16 Poultry	0.2 in the carcass fat	PRL	Advanced to 5	

1/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

44. HEXACHLOROBENZENE

Residue: Hexachlorobenzene 3/

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
44.1 Carcase meat of cattle	1 in the carcass fat	PRL	)	)
44.2 Carcase meat of sheep			)	)
44.3 Carcase meat of goat			)	)
44.4 Carcase meat of pig			) Advanced to 8	) 138
44.5 Poultry	)	)	)	
44.6 Eggs 2/	1 on a shell-free basis	)	)	
44.7 Milk	0.5 on a fat basis	)	)	)
44.8 Milk products			)	)
44.9 Raw cereals	0.05	)	)	-
44.10 Flour and similar milled cereal products	0.01	)	)	-

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

3/ The 1974 JMPR set a 'conditional ADI'.

45. HYDROGEN CYANIDE

Residue: Hydrogen cyanide

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
45.1 Raw cereals	75	T	9	-
45.2 Flour	6	T	9	-

46. HYDROGEN PHOSPHIDE (Syn.: Phosphine)

Residue: Hydrogen phosphide

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
46.1 Raw cereals	0.1	)	9	-
46.2 Flour and other		)		
milled cereal products	0.01	)	9	-
46.3 Dried vegetables	0.01	)	9	-
46.4 Spices	0.01	) T	9	-
46.5 Breakfast cereals	0.01	)	9	-
46.6 Nuts	0.01	)	9	
46.7 Peanuts	0.01	)	9	
46.8 Dried fruit	0.01	)	9	
46.9 Cocoa beans	0.01	)	9	
46.10 Dried foods	0.01	)	9	

47. INORGANIC BROMIDE 1/

Residue: Determined and expressed as total bromide ion from all sources.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
47.1 Raw cereals	50	T	)	)
47.2 Citrus fruit	30	TT	)	)
47.3 Strawberries	30	TT	)	)
47.4 Avocados	75	TT	)	)
47.5 Dried prunes	20	TT	)	)
47.6 Dried peaches	50	TT	)	)
47.7 Raisins, sultanas, currants (dried products)	100	TT	) 9	) -
47.8 Dried dates	100	TT	)	)
47.9 Dried figs	250	TT	)	)
47.10 Herbs	400	TT	)	)
47.11 Spices	400	TT	)	)
47.12 Fruit	20	TT	)	)
47.13 Dried fruit	30	TT	)	)
47.14 Whole meal flour	50	T	)	)

1/ Resulting from the use of organic bromide fumigants.

48. LINDANE (Syn.: gamma-BHC or gamma-HCH)

Residue: Lindane

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u> 143
48.1 Milk	0.2 on a fat basis	TPRL	9	
48.2 Milk products			9	
48.3 Eggs 2/	0.1 on a shell-free basis	TPRL	9	

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
48.4 Poultry	0.7 in the carcass fat	TPRL	9	
48.5 Carcass meat of cattle	2 in the carcass fat	TT	9	
48.6 Carcass meat of pigs				
48.7 Carcass meat of sheep				
48.8 Raw cereals (including rice)	0.5	TT	9	
48.9 Cherries	3	TT	9	
48.10 Granberries	3	TT	9	
48.11 Grapes	3	TT	9	
48.12 Plums	3	TT	9	
48.13 Strawberries	3	TT	9	
48.14 Vegetables	3	TT	Returned to 6	141
48.15 Beans, dried	1	TT	Returned to 6	142
48.16 Apples	1	TT	Advanced to 5	
48.17 Pears	1	TT	Advanced to 5	
48.18 Sugar beet (roots)	0.2	TT	Advanced to 5	
48.19 Sugar beet (tops)	0.2	TT	Advanced to 5	

49. MALATHION

Residue: Combined residues of malathion and malaoxon.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
49.1 Raw cereals	8	)	9	144
49.2 Citrus fruit	4	)	9	
49.3 Dried fruit	8	)	9	
49.4 Nuts (whole in the shell)	8	)	9	
49.5 Whole meal and flour from rye and wheat	2	)	9	
49.6 Lettuce	8	)	)	)
49.7 Endive	8	)	)	)
49.8 Cabbage	8	)	)	)
49.9 Spinach	8	)	)	)
49.10 Blackberries	8	)	Returned to 6 1/2	145
49.11 Raspberries	8	)	)	)
49.12 Cherries	6	)	)	)
49.13 Peaches	6	)	)	)
49.14 Plums	6	)	)	)
49.15 Broccoli	5	) T	)	)
49.16 Tomato	3	)	9	
49.17 Kale	3	)	9	
49.18 Turnip	3	)	Returned to 6 1/2	145
49.19 Apples	2	)	Returned to 6 1/2	145
49.20 Green bean	2	)	9	
49.21 Celery	1	)	Returned to 6 1/2	145
49.22 Strawberries	1	)	)	)
49.23 Pears	0.5	)	)	)
49.24 Blueberries 2/	0.5	)	)	)
49.25 Peas (in the pod)	0.5	)	)	)
49.26 Cauliflower	0.5	)	9	
49.27 Peppers	0.5	)	)	)
49.28 Eggplant (aubergine)	0.5	)	)	)
49.29 Kohlrabi	0.5	)	)	)
49.30 Root vegetables (except turnips)	0.5	)	)	)
49.31 Swiss chard (chard)	0.5	)	)	)
49.32 Collard	0.5	)	)	)

1/ Returned for a fourth round of government comments.

2/ Blueberry (or Huckleberry) includes the following varieties: V. corymbosum L., V. angustifolium Ait., V. askei Reade, etc.



<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
49.33 Grapes	8	T	)	
49.34 Dried beans	8	T	) Advanced to 5	4/ 146
49.35 Lentils	8	T	)	146

50. MANCOZEB

Residue: Mancozeb

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
50.1 Potatoes	1	TT	Returned to 6	147

51. METHIDATHION

Residue: Methidathion 1/

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
51.1 Citrus fruit	2	)	)	)
51.2 Apples	0.5	)	)	)
51.3 Pears	0.5	)	)	)
51.4 Apricots	0.2	)	)	)
51.5 Cherries	0.2	)	)	)
51.6 Nectarines	0.2	)	)	)
51.7 Peaches	0.2	)	)	)
51.8 Plums	0.2	)	)	)
51.9 Grapes	0.2	)	)	)
51.10 Cabbage	0.2	)	)	)
51.11 Cauliflower	0.2	)	)	)
51.12 Leafy vegetables	0.2	)	)	)
51.13 Beans	0.1	) TT	) Advanced to 5	) 148
51.14 Peas	0.1	)	)	)
51.15 Tomato	0.1	)	)	)
51.16 Maize (grain)	0.1	)	)	)
51.17 Sorghum (grain)	0.1	)	)	)
51.18 Cotton seed oil (crude)	1	)	)	)
51.19 Cotton seed	0.2	)	)	)
51.20 Hops (dried)	3	)	)	)
51.21 Tea (dry, manufactured)	0.1	)	)	)
51.22 Potatoes	0.02 2/	)	)	)
51.23 Meat of cattle	0.02 2/	)	)	)
51.24 Meat of sheep		)	)	)
51.25 Meat of pigs		)	)	)
51.26 Poultry		)	)	)
51.27 Fat of cattle		)	)	)
51.28 Fat of sheep		)	)	)
51.29 Fat of pigs		)	)	)
51.30 Poultry fat		)	)	)
51.31 Edible offal of cattle		)	)	)
51.32 Edible offal of sheep		)	)	)
51.33 Edible offal of pigs	)	)	)	
51.34 Edible offal of poultry	)	)	)	
51.35 Milk	0.02 2/	)	)	)
51.36 Milk products	0.02 2/	)	)	)
51.38 Eggs 3/ shell-free	0.02 on a basis 2/	)	)	)

1/ Residues in animal products from feeding on treated forage and plant products.

2/ Level at or about the limit of determination.

3/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

4/ The Committee recommended that Steps 6, 7 and 8 be omitted.

52. METHYL BROMIDE (Syn.: Bromomethane)

Residue: Bromomethane

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
52.1 Nuts	100 1/	)	)	
52.2 Peanuts	100 1/	)	)	
52.3 Raw cereals	50 1/	)	)	
52.4 Cocoa beans	50 1/	)	)	
52.5 Dried fruits	20 1/	)	)	
52.6 Milled cereal products	10 3/	) GL	) 2/	
52.7 Bread and other cooked cereal products	0.5 4/	)	)	
52.8 Cocoa products	0.5 4/	)	)	
52.9 Dried fruits	0.5 4/	)	)	
52.10 Nuts	0.5 4/	)	)	
52.11 Peanuts	0.5 4/	)	)	

1/ To apply at point of entry into a country and, in case of cereal for milling, if product has been freely exposed to air for a period of at least 24 hours after fumigation and before sampling.

2/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

3/ To apply to milled cereal products to be subjected to baking or cooking.

4/ To apply to commodity at point of retail sale or when offered for consumption.

53. MEVINPHOS

Residue: cis- and trans- isomers determined and expressed as sum of both.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
53.1 Broccoli	1	)	)	
53.2 Brussels sprout	1	)	)	
53.3 Cabbage	1	)	)	
53.4 Cauliflower	1	)	)	
53.5 Collard	1	)	)	
53.6 Cherries	1	)	)	
53.7 Strawberries	1	)	)	
53.8 Apples	0.5	)	)	
53.9 Grapes	0.5	)	)	
53.10 Peaches	0.5	)	)	
53.11 Lettuce	0.5	)	)	
53.12 Spinach	0.5	) T	) Advanced to 5	
53.13 Cucumber	0.2	)	)	
53.14 Tomato	0.2	)	)	
53.15 Apricots	0.2	)	)	
53.16 Citrus fruit	0.2	)	)	
53.17 Pears	0.2	)	)	
53.18 Carrot	0.1	)	)	
53.19 Beans	0.1	)	)	
53.20 Onion	0.1	)	)	
53.21 Peas	0.1	)	)	
53.22 Potatoes	0.1	)	)	
53.23 Turnip	0.1	)	)	
53.24 Melons	0.05	)	)	

54. MONOCROTOPHOS

Residue: Monocrotophos

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
54.1 Apples	1	TT	)	149
54.2 Pears	1	TT	)	149
54.3 Hops (dried)	1	T	)	
54.4 Citrus fruit	0.2	T	)	
54.5 Tomato	0.5	T	)	
54.6 Beans	0.2	T	)	
54.7 Brussels sprout	0.2	T	)	
54.8 Cabbage	0.2	T	)	
54.9 Cauliflower	0.2	T	)	
54.10 Onion	0.1	T	)	
54.11 Peas	0.1	T	)	
54.12 Coffee (raw beans)	0.1	T	)	
54.13 Cottonseed	0.1	T	)	
54.14 Carrot	0.05 1/	T	)	
54.15 Maize (grain)	0.05 1/	T	)	
54.16 Potatoes	0.05 1/	T	)	Advanced to 5
54.17 Turnip	0.05 1/	T	)	
54.18 Soya beans	0.05 1/	T	)	
54.19 Sugar beet	0.05 1/	T	)	
54.20 Cottonseed oil	0.05	T	)	
54.21 Meat of cattle	0.02 1/	T 3/	)	
54.22 Meat of goats			)	
54.23 Meat of pigs			)	
54.24 Meat of sheep			)	
54.25 Poultry			)	
54.26 Edible offal of cattle	0.02 1/	T 3/	)	
54.27 Edible offal of goats			)	
54.28 Edible offal of pigs			)	
54.29 Edible offal of sheep			)	
54.30 Edible offal poultry			)	
54.31 Milk	0.002 1/	T 3/	)	
54.32 Milk products	0.02 1/	T 3/	)	
54.33 Eggs 2/	0.02 on a shell-free basis 1/	T 3/	)	

1/ Level at or about the limit of determination.

2/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

3/ Residues in products of animal origin arise from feeding treated plant products.

55. OMETHOATE 4/

Residue: Omethoate

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
55.1 Apples	2	)	)	150
55.2 Apricots	2	)	)	
55.3 Cherries	2	)	)	
55.4 Grapes	2	) TT	)	Returned to 6
55.5 Peaches	2	)	)	
55.6 Pears	2	)	)	
55.7 Plums	2	)	)	

4/ See also dimethoate and formothion.

56. ORTHO-PHENYLPHENOL (Syn.: 2-phenylphenol) and its SODIUM SALT

Residue: 2-phenylphenol and sodium 2-phenylphenate, expressed as 2-phenylphenol.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
56.1 Cantaloupe			withdrawn	
56.2 Pears	25	)	9	
56.3 Carrot	20	)	Returned to 6	151
56.4 Peaches	20	)	9	
56.5 Apples	15	)	Returned to 6 1/	152
56.6 Plums	15	)	)	153
56.7 Sweet potato	15	)	)	
56.8 Cantaloupe	10 in the	)	)	
	edible	)	)	
	portion	)	)	
56.9 Citrus fruit	10	) T	) 9	
56.10 Cucumber	10	)	)	
56.11 Pineapple	10	)	)	
56.12 Tomato	10	)	)	
56.13 Cherries	3	)	)	
56.14 Nectarines	3	)	)	
56.15 Peppers	10	)	)	

1/ Returned for a third round of government comments in the light of a proposal to increase to 25 mg/kg.

57. PARAQUAT 2/

Residue: Paraquat cation

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
57.1 Cottonseed	0.2	)	Advanced to 8	154
57.2 Potatoes	0.2	)	Advanced to 5	
57.3 Cottonseed oil (edible and refined)	0.5	) T	Advanced to 8	
57.4 Sugar cane juice			withdrawn	
57.5 Rice in the husk	10	)	) 4/	
57.6 Olives (unprocessed)	1	)	) 4/	
57.7 Rice (polished)	0.5	)	)	
57.8 Sorghum	0.5	) T	Advanced to 5	
57.9 Maize	0.1	)	) 4/	
57.10 Soya beans	0.1	)	) 4/	
57.11 Vegetables	0.05 3/	)	) 4/	
57.12 Milk (whole)	0.01 3/	)	) 4/	

2/ As dichloride, di-(methylsulphate) and possibly other salts.

3/ Level at or about the limit of determination.

4/ The Committee recommended that Steps 6, 7 and 8 be omitted.

58. PARATHION

Residue: Combined residues of parathion and paraoxon.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
58.1 Vegetables (except carrot)	0.7	)	9	-
58.2 Peaches	1	)	9	-
58.3 Citrus fruit	1	) T	returned to 6 5/	155
58.4 Apricots	1	)	9	-
58.5 Fruit	0.5	)	9	-

5/ Returned for third round of government comments and referred to the JMPR for reconsideration on the basis of data provided by governments.

59. PARATHION-METHYL

Residue: Combined residues of parathion-methyl and its oxygen analogue.

<u>Food</u>	<u>Limit</u> ( <u>mg/kg</u> )	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
				157
59.1 Cole crops	0.2	)	)	)
59.2 Cantaloupe	0.2	)	)	)
59.3 Melons	0.2	) TT	) Returned to 6	) 156
59.4 Cucumber	0.2	)	)	)
59.5 Cottonseed oil	0.05	)	9	)
59.6 Vegetables	1	)	Returned to 6 1/	)
59.7 Fruit	0.2	)	Returned to 6 1/	)

1/ Returned for a third round of government comments and referred to the JMPR.

60. PHOSALONE

Residue: Phosalone

<u>Food</u>	<u>Limit</u> ( <u>mg/kg</u> )	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
				158, 159
60.1 Apples	5	)	)	)
60.2 Grapes	5	)	)	)
60.3 Peaches	5	)	)	)
60.4 Plums	5	)	)	)
60.5 Cherries	2	)	)	)
60.6 Pears	2	)	)	)
60.7 Beet root	2	)	)	)
60.8 Hops (dried)	2	)	)	)
60.9 Citrus fruit	1	)	)	)
60.10 Strawberries	1	)	)	)
60.11 Broccoli	1	)	)	)
60.12 Brussels sprout	1	) T	Advanced to 5	)
60.13 Cabbage	1	)	)	)
60.14 Cucumber	1	)	)	)
60.15 Lettuce	1	)	)	)
60.16 Peas	1	)	)	)
60.17 Tomato	1	)	)	)
60.18 Chestnuts	0.1 on a shell-free ) basis 2/ )	)	)	)
60.19 Pecans	0.1 on a shell-free ) basis 2/ )	)	)	)
60.20 Potatoes	0.1 2/ )	)	)	)
60.21 Rapeseed	0.1 2/ )	)	)	)

2/ Level at or about the limit of determination.

61. PHOSPHAMIDON

Residue: Expressed as the sum of phosphamidon and its desethyl derivate.

<u>Food</u>	<u>Limit</u> ( <u>mg/kg</u> )	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
61.1 Raw cereals	0.1	) )		)
61.2 Apples	0.5	) )		)
61.3 Pears	0.5	) )		)
61.4 Citrus fruit	0.4	) )		)
61.5 Cole crops	0.2	) )		)
61.6 Water melon	0.1	) T )	9	) -
61.7 Tomato	0.1	) )		)
61.8 Lettuce	0.1	) )		)
61.9 Cucumber	0.1	) )		)

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
61.10 Beans	)	)	)	)
61.11 Broccoli	)	)	)	)
61.12 Brussel sprouts	)	)	)	)
61.13 Cabbage	)	)	)	)
61.14 Carrots	) 0.2	) T	) Advanced to 8	) 160
61.15 Celeriac	)	)	)	)
61.16 Green peppers	)	)	)	)
61.17 Peas	)	)	)	)
61.18 Spinach	)	)	)	)
61.19 Cherries	)	)	)	)
61.20 Plums	)	)	)	)
61.21 Strawberries	)	)	)	)
61.22 Root vegetables (incl. potatoes)	) 0.05 1/	)	) 9	) 161

1/ Level at or about the limit of determination.

62. PIPERONYL BUTOXIDE

Residue: Piperonyl butoxide

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
62.1 Raw cereals	20	TT	9	-
62.2 Fruit	8	TT	9	-
62.3 Dried fruit	8	TT	9	-
62.4 Dried vegetables	8	TT	9	-
.5 Oil seeds	8	TT	9	-
.6 Tree nuts	8	TT	9	-
.2.7 Vegetables	8	TT	returned to 6 2/	163
62.8 Peanuts	8	TT	)	
62.9 Fish (dried)	20	T	Advanced to ) 5	

2/ Returned for a third round of government comments and referred to the JMPR.

63. PYRETHRINS

Residue: Sum of Pyrethrins I and II and other structurally related insecticidal ingredients of pyrethrum

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
63.1 Raw cereals	3	)	9	
63.2 Fruit	1	)	9	
63.3 Dried fruits	1	)	9	
63.4 Dried vegetables	1	) TT	9	
63.5 Oil seeds	1	)	9	
63.6 Tree nuts	1	)	9	
63.7 Vegetables	1	)	9	
63.8 Peanuts	1	)	Advanced to 5	
63.9 Fish (dried)	3	T	Advanced to 5	

64. QUINTOZENE

Residue: Quintozene including hexachlorobenzene, pentachloroaniline, methyl pentachlorophenylsulfide and pentachlorobenzene.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
64.1 Bananas	1 in the whole product	TT	9	164
64.2 Lettuce	3	TT	Returned to 6 3/	
64.3 Peanuts	2 in the kernels	TT	Returned to 6 3/	
64.4 Navy beans	0.2	TT	Returned to 6 3/	

3/ Returned for a third round of government comments and to JMPR.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
64.5 Potatoes	0.2	)	Returned to 6	)
64.6 Tomato	0.1	)	)	)
64.7 Cottonseed	0.03	)	)	)
64.9 Broccoli	0.02	)	)	)
64.10 Cabbage	0.02	)	)	)
64.11 Bananas	0.01 in	)	)	)
	the pulp	)	)	)
64.12 Beans (other than navy beans)	0.01	) TT	) 9	)
64.12 Pepper (bell type)	0.01	)	)	)

65. THIABENDAZOLE

Residue: Thiabendazole

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
65.1 Citrus fruit	10	)	9	
65.2 Bananas	3	)	9	
65.3 Bananas	0.4 in	)		
	the pulp	) T	9	
65.4 Apples	10	)	Advanced to 8	
65.5 Pears	10	)	Advanced to 8	

66. TRICHLORFON

Residue: Trichlorfon

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
66.1 Peppers	1	)	)	169.
66.2 Bananas (pulp)	0.2	)	)	
66.3 Peaches	0.2	)	)	166
66.4 Brussels sprouts	0.2	)	)	
66.5 Cauliflowers	0.2	)	)	
66.6 Kale	0.2	)	)	
66.7 Sweet corn (see 66.12)	0.2 in	)	)	
	kernels	)	)	
	plus cob	)	)	
66.8 Celery	0.2	)	)	
66.9 Beet root	0.2	)	)	
66.10 Wheat	0.2	)	)	
66.11 Barley	0.1	)	)	
66.12 Maize (except sweet corn)	0.1	)	)	
66.13 Apples	0.1	)	)	
66.14 Cherries	0.1	) TT	) Advanced to 8	
66.15 Citrus fruit	0.1	)	)	
66.16 Strawberries	0.1	)	)	167
66.17 Artichokes	0.1	)	)	
66.18 Cabbage	0.1	)	)	
66.19 Cow peas	0.1	)	)	
66.20 Beans (black eyed, green, lima)	0.1	)	)	
66.21 Mustard greens	0.1	)	)	
66.22 Pumpkin	0.1	)	)	
66.23 Tomato	0.1	)	)	
66.24 Turnip	0.1	)	) Returned to 6	168
66.25 Cottonseed	0.1	)	)	
66.26 Linseed	0.1	)	) Returned to 8	
66.27 Rapeseed	0.1	)	)	

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
66.28 Safflowerseed	0.1	)	)	)
66.29 Soya beans	0.1	)	)	)
66.30 Peanuts	0.1 on a shell-free basis	) ) ) TT	) ) ) Advanced to 8	) ) ) -
66.31 Meat, fat and offal of cattle and pigs	0.1	)	)	)
66.32 Milk (whole)	0.05	)	)	)
66.33 Sugar beet	0.05	)	)	)

67. CYHEXATIN (Syn.: Tricyclohexylhydroxystannate)

Residue: Tricyclohexyltin hydroxide, excluding organic degradation products and inorganic tin.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
				170
67.1 Apples	2	TT	Advanced to 8	171
67.2 Pears	2	TT	Advanced to 8	171
67.3 Citrus fruit	2	TT	)	172
67.4 Tea (dry, manufactured)	2	TT	)	173
67.5 Meat	0.2	TPRL	Advanced to ) 5	174
67.6 Milk	0.05 on a	TPRL	)	174
67.7 Milk products	0.5 fat basis	TPRL	)	174

68. AZINPHOS-ETHYL

Residue: Determined as azinphos-ethyl and its P=O analogue and expressed as azinphos-ethyl.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
68.1 Apples	0.5	)	)	
68.2 Pears	0.5	)	)	
68.3 Vegetables	0.5	)	)	
68.4 Potatoes	0.05 1/	)	) 2/	
68.5 Tomato	1	) GL	)	
68.6 Soybeans (dry)	0.2	)	)	
68.7 Cottonseed	0.05 1/	)	)	
68.8 Rapeseed	0.05 1/	)	)	

69. BENOMYL

Residue: Determined as sum of benomyl and carbendazim (MBC) and expressed as carbendazim.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
69.1 Citrus fruit	10	)	)	
69.2 Apples	5	)	)	
69.3 Pears	5	)	)	
69.4 Blackberries	5	)	)	
69.5 Black currant	5	)	)	
69.6 Dew berries	5	) GL	) 2/	
69.7 Boysenberries	5	)	)	
69.8 Loganberries	5	)	)	
69.9 Grapes	10	)	)	
69.10 Raspberries	5	)	)	
69.11 Strawberries	5	)	)	

1/ Level at or about the limit of determination.

2/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.



<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
69.12 Apricots	5	)	)	)
69.13 Cherries	10	)	)	)
69.14 Nectarines	2	)	)	)
69.15 Peaches	10	)	)	)
69.16 Plums	2	)	)	)
69.17 Prunes	2	)	)	)
69.18 Avocados	0.5	)	)	)
69.19 Bananas	1	)	)	)
69.20 Mangoes	2	)	)	)
69.21 Melons	0.5	)	)	)
69.22 Potatoes	0.1 (*)	)	)	)
69.23 Sugar beet	0.1 (*)	)	)	)
69.24 Brussels sprout	0.5	)	)	)
69.25 Celery	2	) GL	) 1/	)
69.26 Dried beans	2	)	)	)
69.27 Lima bean	2	)	)	)
69.28 Snap bean	2	)	)	)
69.29 Mushrooms	1	)	)	)
69.30 Squash	0.5	)	)	)
69.31 Tomato	5	)	)	)
69.32 Raw cereals	0.1 (*)	)	)	)
69.33 Almonds	0.1 (*)	)	)	)
69.34 Macadamia nuts	0.1 (*)	)	)	)
69.35 Pecans	0.1 (*)	)	)	)
69.36 Peanuts	0.1 (*)	)	)	)
69.37 Meat of cattle	0.1 (*)	)	)	)
69.38 Meat of sheep	0.1 (*)	)	)	)
69.39 Milk (whole)	0.1 (*)	)	)	)
69.40 Bean vines	30	)	)	)
69.41 Sugar beet tops	5	)	)	)
69.42 Barley straw	2	)	)	)
69.43 Almond hulls	1	)	)	)
69.44 Peanut hay	2	)	)	)

(\*) Level at or about the limit of determination.

1/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

70. BROMOPROPYLATE

Residue: Bromopropylate

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
70.1 Citrus fruit	5	)	)	)
70.2 Citrus fruit (pulp)	0.2	)	)	)
70.3 Apples	5	)	)	)
70.4 Pears	5	)	)	)
70.5 Grapes	5	)	)	)
70.6 Strawberries	5	)	)	)
70.7 Cherries	5	)	)	)
70.8 Nectarines	5	) T	) 3	) 175
70.9 Peaches	5	)	)	)
70.10 Plums	5	)	)	)
70.11 Prunes	5	)	)	)
70.12 Bananas	5	)	)	)
70.13 Bananas (pulp)	0.2	)	)	)
70.14 Vegetables	1	)	)	)
70.15 Cottonseed	1	)	)	)
70.16 Tea	5	)	)	)
70.17 Hops (dried)	5	)	)	)

71. CAMPHECHLOR

Residue: Camphechlor

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
71.1 Bananas (whole)	2	)	)	
71.2 Pineapples	2	)	)	
71.3 Carrots	2	)	)	
71.4 Parsnip	2	)	)	
71.5 Radish	2	)	)	
71.6 Rutabaga	2	)	)	
71.7 Onion	2	)	)	
71.8 Lettuce	2	)	)	
71.9 Spinach	2	)	)	
71.10 Broccoli	2	)	)	
71.11 Brussels sprout	2	)	)	
71.12 Cabbages	2	)	)	
71.13 Cauliflower	2	)	)	
71.14 Collard	2	)	)	
71.15 Kales	2	)	)	
71.16 Kohlrabi	2	)	)	
71.17 Celery	2	)	)	
71.18 Dried bean	2	)	)	
71.19 Lima bean	2	)	)	
71.20 Snap bean	2	) GL	) 1/	
71.21 Soya bean (dry)	0.5	)	)	
71.22 Peas	2	)	)	
71.23 Okra	2	)	)	
71.24 Eggplant	2	)	)	
71.25 Peppers	2	)	)	
71.26 Pimento	2	)	)	
71.27 Tomato	2	)	)	
71.28 Rice in the husk	2	)	)	
71.29 Rice (polished)	0.5	)	)	
71.30 Maize (grain)	0.5	)	)	
71.31 Barley	2	)	)	
71.32 Oat	2	)	)	
71.33 Rye	2	)	)	
71.34 Sorghum	2	)	)	
71.35 Wheat	2	)	)	
71.36 Nuts (shelled)	2	)	)	
71.37 Peanut	0.5	)	)	
71.38 Cottonseed oil (refined)	0.5	)	)	
71.39 Peanut oil (refined)	0.5	)	)	
71.40 Rapeseed oil (refined)	0.5	)	)	
71.41 Soyabean oil (refined)	0.5	)	)	
71.42 Meat of cattle	5 2/	)	)	
71.43 Meat of goats	5 2/	)	)	
71.44 Meat of pigs	5 2/	)	)	
71.45 Meat of sheep	5 2/	)	)	
71.46 Milk	0.5 on a ) fat basis )	)	)	
71.47 Milk products	0.5 on a ) fat basis )	)	)	

1/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

2/ Determined and expressed on the rendered or extracted fat.

72. CARBENDAZIM (Syn.: MBC)

Residue: Carbendazim

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
72.1 Citrus fruit	10	)	)	)
72.2 Apples	5	)	)	)
72.3 Pears	5	)	)	)
72.4 Gooseberries	5	)	)	)
72.5 Grapes	10	)	)	)
72.6 Strawberries	5	)	)	)
72.7 Cherries	10	)	)	)
72.8 Peaches	10	)	)	)
72.9 Plums	2	)	)	)
72.10 Bananas (whole)	1	)	)	)
72.11 Bananas (pulp)	0.5	)	)	)
72.12 Melons	0.5	) GL	) 1/	)
72.13 Sugar beet	0.2 (*)	)	)	)
72.14 Lettuce	5	)	)	)
72.15 Celery	2	)	)	)
72.16 Bean, dwarf	2	)	)	)
72.17 Cucumber	0.5	)	)	)
72.18 Gherkin	2	)	)	)
72.19 Mushrooms	1	)	)	)
72.20 Tomato	5	)	)	)
72.21 Raw cereals	0.1 (*)	)	)	)
72.22 Coffee beans (raw)	0.1 (*)	)	)	)
72.23 Sugar beet tops	5	)	)	)

73. DEMETON-S-METHYL

Residue: Combined residues of demeton-S-methyl, oxydemeton-methyl and demeton-S-methyl sulphone.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
73.1 Citrus fruit	0.5	)	)	)
73.2 Apples	1	)	)	)
73.3 Pears	0.5	)	)	)
73.4 Blackberries	0.5	)	)	)
73.5 Black currant	2	)	)	)
73.6 Red currant	2	)	)	)
73.7 Gooseberries	0.5	)	)	)
73.8 Grapes	2	)	)	)
73.9 Raspberries	0.5	)	)	)
73.10 Strawberries	0.5	)	)	)
73.11 Peaches	1	)	)	)
73.12 Plums	1	)	)	)
73.13 Water melon	0.2	)	)	)
73.14 Cantaloupe	0.2	) T	) 3	) 175
73.15 Potatoes	0.2	)	)	)
73.16 Sugar beet	0.1	)	)	)
73.17 Turnip	0.1	)	)	)
73.18 Lettuce	0.5	)	)	)
73.19 Broccoli	0.2	)	)	)
73.20 Brussels sprout	0.2	)	)	)
73.21 Cabbages	0.2	)	)	)
73.22 Cauliflower	0.2	)	)	)
73.23 Beans	0.2	)	)	)
73.24 Peas	0.2	)	)	)
73.25 Cucumber	0.2	)	)	)

(\*) Level at or about the limit of determination.

1/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
73.26 Eggplant	0.2	)	)	)
73.27 Pumpkin	0.2	)	)	)
73.28 Summer squash	0.5	)	)	)
73.29 Winter squash	0.2	)	)	)
73.30 Raw cereals	0.2	)	)	)
73.31 Nuts (shelled)	0.05 (*)	)	)	)
73.32 Cottonseed	0.1	)	)	)
73.33 Meat of cattle	0.05 (*)	)	)	)
73.34 Meat of pigs	0.05 (*)	) T	) 3	) 175
73.35 Meat of sheep	0.05 (*)	)	)	)
73.36 Poultry	0.05 (*)	)	)	)
73.37 Fat of cattle	0.05 (*)	)	)	)
73.38 Fat of pigs	0.05 (*)	)	)	)
73.39 Fat of sheep	0.05 (*)	)	)	)
73.40 Fat of poultry	0.05 (*)	)	)	)
73.41 Milk	0.05 (*)	)	)	)
73.42 Milk products	0.05 (*)	)	)	)
73.43 Eggs 1/	0.05 (*) on)	)	)	)
	a shell-free	)	)	)
	basis	)	)	)
73.44 Animal feed (green)	5	)	)	)
73.45 Animal feed (dry)	10	)	)	)

(\*) Level at or about the limit of determination.

1/ The term "eggs" covers egg white plus egg yolk and, therefore, includes products such as fresh whole eggs or whole egg pulp.

74. DISULFOTON

Residue: Determined as disulfoton sulphone and demeton-S-sulphone and expressed as disulfoton.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
74.1 Pineapple	0.1 (*)	)	)	)
74.2 Vegetables (including	)	)	)	)
beans, broccoli, Brussels	)	)	)	)
sprout, cabbage,	)	)	)	)
cauliflower, lettuce,	)	)	)	)
peas, potatoes, spinach,	)	)	)	)
tomato, sugar beet)	0.5	)	)	)
74.3 Soya beans (dry)	0.1 (*)	) TT	) 3	) 175
74.4 Raw cereals	0.2	)	)	)
74.5 Rice in the husk	0.5	)	)	)
74.6 Pecans	0.1 (*)	)	)	)
74.7 Peanuts (kernels)	0.1 (*)	)	)	)
74.8 Cottonseed	0.2	)	)	)
74.9 Coffee beans	0.1 (*)	)	)	)
74.10 Forage crops (green)	5	)	)	)

(8) Level at or about the limit of determination.

75. PROPOXUR

Residue: Combined residues of main metabolites, expressed as propoxur.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
75.1 Apples	3	)	)	)
75.2 Pears	3	)	)	)
75.3 Blackberries	3	) T	) 3	) 175
75.4 Red currant	3	)	)	)
75.5 Gooseberries	3	)	)	)
75.6 Strawberries	3	)	)	)

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
75.7 Cherries	3	)	)	)
75.8 Peaches	3	)	)	)
75.9 Plums	3	)	)	)
75.10 Vegetables	3	) T	) 3	) 175
75.11 Root vegetables	0.5	)	)	)
75.12 Rice in the husk	0.5	)	)	)
75.13 Rice (hulled)	0.1	)	)	)
75.14 Cocoa beans	0.05 (*)	)	)	)
75.15 Meat	0.05 (*)	)	)	)
75.16 Milk (whole)	0.05 (*)	)	)	)
75.16 Animal feedstuffs (green)	5	)	)	)

(\*) Level at or about the limit of determination.

76. THIOMETON

Residue: Determined as thiometon sulphone and expressed as thiometon.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
76.1 Apples	0.5	)	)	)
76.2 Pears	0.5	)	)	)
76.3 Grapes	0.5	)	)	)
76.4 Strawberries	0.5	) TT	) TT	)
76.5 Cherries (sweet)	0.5	)	)	)
76.6 Peaches	0.5	)	)	)
76.7 Plums	0.5	)	)	)
76.8 Carrot	0.05 (*)	) T 1/	) 3	) 175
76.9 Potatoes	0.05 (*)	) T 1/	)	)
76.10 Sugar beet	0.05 (*)	) T 1/	)	)
76.11 Lettuce	0.5	)	)	)
76.12 Beans	0.5	) TT	)	)
76.13 Peas	0.5	)	)	)
76.14 Peppers	0.5	)	)	)
76.15 Tomato	0.5	)	)	)
76.16 Raw cereals	0.05 (*)	) T 1/	)	)
76.17 Hops (dry)	0.5	) TT	)	)

(\*) Level at or about the limit of determination.

1/ These tolerances are not listed as "temporary" although the ADI is "temporary".

77. THIOPHANATE-METHYL

Residue: Determined as thiophanate-methyl and carbendazim and expressed as carbendazim.

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
77.1 Citrus fruit	10	)	)	)
77.2 Apples	5	)	)	)
77.3 Pears	5	)	)	)
77.4 Black currant	5	)	)	)
77.5 Gooseberries	5	)	)	)
77.6 Grapes	10	)	)	)
77.7 Raspberries	10	)	)	)
77.8 Strawberries	5	)	)	)
77.9 Cherries	10	)	)	)
77.10 Peaches	10	)	)	)
77.11 Plums	2	)	)	)
77.12 Bananas	1	)	)	)
77.13 Carrot	5	)	)	)
77.14 Sugar beet	0.1 (*)	) TT	) 3	) 175
77.15 Onion	0.1 (*)	)	)	)
77.16 Lettuce	5	)	)	)
77.17 Celery	20	)	)	)
77.18 Broad bean	2	)	)	)
77.19 Dwarf bean	2	)	)	)
77.20 French bean	2	)	)	)
77.21 Runner bean	2	)	)	)
77.22 Kidney bean	2	)	)	)
77.23 Cucumber	0.5	)	)	)
77.24 Gherkin	2	)	)	)
77.25 Mushrooms	1	)	)	)
77.26 Tomato	5	)	)	)
77.27 Raw cereals	0.1 (*)	)	)	)
77.28 Sugar beet tops	5	)	)	)

(\*) Level at or about the limit of determination.

78. VAMIDOTHION

Residue: Vamidothion

<u>Food</u>	<u>Limit</u> (mg/kg)	<u>Type of</u> <u>Limit</u>	<u>Step</u>	<u>Paragraph</u>
78.1 Apples	2	)	)	)
78.2 Pears	2	)	)	)
78.3 Grapes	0.5	) GL	) 1/	)
78.4 Sugar beet	0.5	)	)	)
78.5 Brussels sprout	1	)	)	)

1/ Not taken up in the Codex Procedure until cleared toxicologically by the JMPR.

REPORT OF THE AD HOC WORKING GROUP ON PRIORITY LISTS 1/

Attendees:

E.R. Houghton - Canada  
A.F.H. Besemer - The Netherlands  
G. Bressau - Federal Republic of Germany  
W.P. Cochrane - Canada  
G. Mathys - E.P.P.O.  
C. Resnick - Israel  
J.T. Snelson - Australia  
M. Spindler - Switzerland  
R.H. Thompson - U.K.  
K.C. Walker - U.S.A.  
  
E.E. Turtle - FAO  
G. Vettorazzi - WHO  
W.L. de Haas - FAO  
L.G. Ladomery - FAO

1. The Working Group first addressed itself to the selection of compounds for priority consideration using various sources noted as follows:
  - (a) The 1974 Good Agricultural Practice Report (prepared by Canada)
  - (b) The 1975 Good Agricultural Practice Report (prepared by Canada) (CX/PR 75/10)
  - (c) Submissions from various countries concerning new and other compounds shown to meet the criteria for consideration.
2. The Group reviewed the selection criteria that candidate compounds must meet in order to be placed on the Priority Lists. These criteria are set forth in the Report of the Third Session, 1968, paragraph 76. Paragraph 76 states that the compound, when used in accordance with good agricultural practice, must result in residues, must affect international trade on a significant scale and should be a matter of public health concern or be creating commercial problems.
3. The Group decided that one further parameter for selection was necessary to facilitate its decisions in selecting candidate compounds for priority listing. If residue limits are already under consideration at some stage of the Codex Procedure for a given compound it will not be included in the priority listings. Countries should note that if a compound is under consideration in the Codex Procedure but not for a particular crop for which there is interest, petitions for consideration of those crops should be sent directly to the Joint Meeting and copies provided to the Chairman of the Codex Committee on Pesticide Residues.
4. Pursuant to a suggestion made earlier by the Secretariat of the FAO/WHO Food Standards Programme, the Group decided to establish three priority lists in descending order of urgency. This was done in order to maintain lists of compounds that meet the criteria by means of which countries and industry are notified well in advance of the need for information to facilitate evaluation by the Joint Meeting. In this regard the Group wished to emphasize the need for countries and industry to provide information on residues, analytical methodology, toxicology and use patterns to the Joint Meeting.
5. The Group, using the sources of candidate compounds and the criteria just referred to, developed three priority lists as follows:

Priority List Number One (1): This list includes those compounds judged to have the highest priority for evaluation by the Joint Meeting.

Carbofuran	2,3-dihydro-2,2-dimethyl-benzofuran-7-yl methylcarbamate
Cyanofenphos	O-4-cyanophenyl-O-ethyl phenylphosphonothionate
Methomyl	1-(methylthio)ethylideneamino methylcarbamate
	=S-methyl-N-(methylcarbamoyloxy) thioacetimidate
Chlorpyrifos-methyl	O,O-dimethyl-O-(3,5,6-trichloro-2-pyridinyl)phosphorothioate
Sec-butylamine	2-aminobutane
Ethephon	2-(chloroethyl) phosphonic acid
Bioresmethrin	5-benzyl-3-furylmethyl-cis,trans-chrysanthemate

1/ See paras 201-212 of the Report of the Committee.

Because of shortage of pyrethrins generally, bioresmethrin may be regarded as a likely replacement in the treatment of cereal grains. For this reason the Group included this compound on Priority List (1) for early consideration by the Joint Meeting.

In respect to the remaining six (6) compounds in Priority List Number One, it was the view of the Group that all were coming into wide scale use, and that there was considerable toxicological and other essential information available for evaluation by the Joint Meeting.

Priority List Number Two (2): This list includes those compounds that also call for early consideration and which should be evaluated in 1976:

Acephate	O,S-dimethyl acetylphosphoramidothioate
Cartap	1,3-di(carbamoylthio)-2-dimethylaminopropane
	S,S'-2-(dimethylamino)trimethylene/bis-thiocarbamate
Cyclosulfyne	2(4-tert-butylphenoxy)-1-methylethyl-2'-chloroethyl sulfite
Dialifor	S-(2-chloro-1-phthalimidoethyl)O,O-diethylphosphorodithioate
Edifenphos	O-ethyl-S,S-diphenylphosphorodithioate
Formetanate	3-dimethylaminomethylene aminophenyl methylcarbamate
Maleic Hydrazide	
Methamidophos	O,S-dimethyl phosphoramidothioate
Phosmet	O,O-dimethyl-S-phthalimidomethyl phosphorodithioate
Pirimicarb	2-dimethylamino-5,6-dimethylpyrimidin-4-yl dimethylcarbamate

Priority List Number Three (3): This list includes those compounds that also meet some of the criteria but do not warrant high priority at this time. These compounds will be included in the list of candidate compounds to be considered by the Working Group on Priorities at the 1976 Meeting of the Codex Committee on Pesticide Residues:

Chlorthal-dimethyl	dimethyl tetrachloroterephthalate
Chlorthiamid	2,6-dichlorothiobenzamide
Dalapon	2,2-dichloropropionic acid
Dicamba	3,6-dichloro-2-methoxy-benzoic acid
Dicrotophos	dimethyl cis-2-dimethyl-carbamoyl-1-methyl vinylphosphate
Dinobuton	2-sec.-butyl-4,6-dinitrophenyl isopropylcarbonate
Dinoseb	2-sec.-butyl-4,6-dinitrophenol
Dithianon	2,3-dicyano-1,4-dithia-anthraquinone
Drazoxolone	4-(2-chlorophenylhydrazono)-3-methyl-5-isoxazolone
Pentachlorophenol (PCP)	
Picloram	4-amino-3,5,6-trichloropicolinic acid
Propanil	3,4 dichloro propionanalide
Propyzamide	3,5 dichloro-N-(1,1-dimethyl-propynyl) benzamide
Tetrachlorvinphos	trans 2-chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl-phosphate

6. Among the compounds listed in the Report on Good Agricultural Practice (CX/PR 75/10) were two antibiotic agents - Blasticidin and Kazugamycin. The Group wished to draw to the Committee's attention that there may be special evaluation procedures applicable to antibiotics that are used as pesticides. This is especially true where an antibiotic is used, or may be used, in the future to control infections in humans and animals and where residues from crop uses may raise questions that their presence could induce resistance in disease organisms affecting animals or humans.

7. It was felt that the Codex Commission may wish to decide how these substances should be dealt with, and this meeting of the Codex Committee on Pesticide Residues may wish to consider this possibility.

8. Among the requests for candidate compounds to be considered by the Group, there was a submission from the FAO/WHO Food Standards Programme on behalf of Ghana. The submission consisted of the results of analyses of cocoa beans for lindane residues. Because lindane is already in the Codex Acceptance Procedure, this submission was transmitted for consideration by the Joint Meeting. (This item is included here for information purposes only).



9. The Group also discussed the re-evaluation status of the ethylenebisdithiocarbamate fungicides by countries and by the Joint Meeting. The Group took note that the Joint Meeting had recently reviewed these compounds and that they were formally scheduled for reconsideration in 1977. (In the advance report of the Joint Meeting the evaluation of these fungicides is discussed and the kind of information that should be supplied in the interim is identified).

10. Because of the importance of these fungicides in crop protection, the Group recommended to the Committee that its report include a statement expressing the urgent need for toxicological information, improved methods of analysis for the parent compound and their degradation product ethylenethiourea and recent residue information and use patterns of essential uses, where alternative compounds are not yet available.

11. The Group also received and commented upon a summary list of groups of compounds compiled by the Secretariat of the Joint Meeting to be considered by the Joint Meeting in 1975. This summary list is appended to this report.

12. The Secretariat of the Joint Meeting also drew attention to the following compounds which had previously been listed for further consideration and which in the opinion of the Secretariat could now be deleted from any priority list. The Group agreed that the following compounds should be deleted:

Acrylonitrile  
Allethrin  
Chloropropylate  
Chlorthion  
Dimethrin  
M.G.K.264

13. The Working Group was asked by the Chairman of the Codex Committee on Pesticide Residues to consider the question of establishing pesticide residue limits for livestock feeds within the Codex procedures on the advice of the Joint Meeting. It was noted that the Codex Committee on Pesticide Residues was primarily responsible for the establishment of pesticide residue limits on human food. However, whenever information came before the Joint Meeting that enabled a recommendation for a residue limit on a feed item, it had been the practice to do so. Such residue limits had been subsequently considered by the Codex Committee on Pesticide Residues and a number of them adopted. It was questioned whether residue limits on animal feeds should be recommended to the Codex Commission on the grounds that they may be outside the terms of reference of the Codex Committee on Pesticide Residues.

14. The Group recommended the present practice to be continued in respect of the consideration of pesticide residue limits on animal feeds, particularly where they may lead to residues on human food. However, it was the view of the Group that more intensive efforts to elaborate such residue limits should not be undertaken at this time.

15. In concluding this report it should be noted that tasks assigned to the Ad Hoc Working Group on Priorities are sufficiently time consuming so as to warrant its meeting two days in advance of the Codex Committee. The Group recommended to the Committee that an Ad Hoc Working Group should be appointed at this session in order to facilitate its meeting next year.

LIST OF COMPOUNDS FOR CONSIDERATION AT THE 1975 JOINT MEETING OF THE FAO WORKING PARTY AND THE WHO COMMITTEE OF EXPERTS ON PESTICIDE RESIDUES: Tentative Proposals of the Secretaries of the Joint Meeting

Group I - Compounds suggested by the Codex Committee on Pesticide Residues and not previously evaluated by the Joint Meeting of Experts:

bioresmethrin  
carbofuran  
chlorpyrifos-methyl  
cyanofenphos  
ethephon  
methomyl  
sec.-butylamine

- Group II - Compounds listed in previous reports of the Joint Meeting as due for re-evaluation in 1975. For these compounds existing recommendations for ADIs on residue limits have mainly been expressed on a temporary basis. The years indicated are those in which each compound was previously evaluated:
- bromophos-ethyl (1972)
  - chlordimeform (1971)
  - coumaphos (1968, 1972)
  - disulfoton (1973)
  - demeton (1965, 1967, 1973)
  - fenthion (1971)
  - methidathion (1972)
  - monocrotophos (1972)
  - omethoate (1971)
  - parathion-methyl (1965, 1968, 1972)
  - piperonyl butoxide (1965, 1966, 1967, 1969, 1972)
  - pyrethrins (1965, 1966, 1967, 1968, 1969, 1970, 1972, 1973)
  - quintozene (1969, 1973)
  - thiophanate methyl (1973)
  - trichlorfon (1971)
- Group III - Certain compounds only partly evaluated at previous meetings for which it seems likely that further progress shall be possible in 1975:
- benomyl (1973)
  - carbendazim (1973)
  - 2,4-D (1970, 1971)
  - leptophos (1974)
- Group IV - Other compounds or problems submitted for evaluation and advice by FAO or WHO. In 1975 it is proposed to consider aldrin and dieldrin within this Group.
- Group V - This Group lists compounds for which re-evaluations are pending without dates having been specified previously. Re-evaluations will be scheduled as soon as appropriate data seem likely to become available. It seems unlikely that re-evaluations of these compounds will be possible in 1975, but it is proposed to do so at future meetings:
- propham/chlorpropham (1965)
  - DNOC (1965)
  - aziphos-ethyl (1973)
  - BHC-mixed isomers (1965, 1968, 1973)
  - camphechlor (1967, 1973)
  - chloropicrin (1965)
  - daminozide (1973)
- fumigants:
- bromoethane (methyl bromide) (1968, 1969)
  - carbon disulfide (1965, 1967, 1968, 1971)
  - carbon tetrachloride (1965, 1967, 1968, 1971)
  - 1,2-dibromoethane (ethylene dibromide) (1965, 1966, 1967, 1968, 1971)
  - 1,2-dichloroethane (ethylene dichloride) (1965, 1966, 1967, 1968, 1971)
  - ethylene oxide (1965, 1968, 1971)
- 2,4,5-T (1970)
  - tecnazene (1973)
  - trichloronat (1971)
  - vamidothion (1973)

REPORT OF THE AD HOC WORKING GROUP ON METHODS OF ANALYSIS 1/

In the discussions of the Ad Hoc Working Group on Methods of Analysis, the following took part:

D.C. Abbott - U.K.  
A. Ambrus - Hungary  
J.A.R. Bates - U.K.  
W.P. Cochrane - Canada  
H. Frehse - I.U.P.A.C.  
P.A. Greve - The Netherlands (Chairman)  
W. deJonckheere - Belgium  
K. Kossmann - Federal Republic of Germany  
T. Stijve - Switzerland  
K. Voldum-Clausen - Denmark  
J.R. Wessel - U.S.A.  
E.E. Turtle - FAO  
G. Vettorazzi - WHO

1. General Remarks

The Working Group examined the comments received from Member countries and IUPAC and considered again the criteria for the selection of reliable analytical methods. It re-affirmed its view expressed in the previous reports that particular weight should be given to multi-residue methods, gas-liquid chromatographic methods and to methods which had been subjected to collaborative studies. The undertaking and subsequent publication of collaborative studies would, therefore, be extremely helpful in the selection of methods suitable for Codex purposes. When collaborative studies were lacking, published methods which were known to have been validated by more than one laboratory were chosen.

It was considered that the ultimate goal of fair practice in international trade depended, among many other things, on the reliability of the analytical results. This, in turn, particularly in pesticide residue analysis, depended not only on the availability of reliable analytical methods, but also on the experience of the analyst and the maintenance of "good practice in the analysis of pesticide residues", which included:

(a) regular assessment of the performance of the method at the tolerance level, as well as at the lower limit of determination, by checking the recovery rate, the standard deviation, the blank response, etc.;

(b) confirmation of the identity of the pesticide residue by independent tests such as thin-layer chromatography, mass spectrometry, infrared spectroscopy, chemical derivatization, etc.;

(c) adequate replication (separate analyses of the same laboratory sample) of determinations so that results can be given with confidence. Repeat analyses by a second analyst are considered advisable in cases when the initial result exceeds the Codex Maximum Residue Limit for Pesticides.

The Working Group suggested that such aspects of good analytical practice should be included in any questionnaire on methods of analysis to be sent out by the Secretariat.

2. Recommendations for Methods of Analysis

2.1 List of Pesticides Considered

The Working Group considered the pesticide substrate combinations which were at Step 9 of the Procedure at the beginning of the 8th Session of the Committee (document CX/PR 75/3), viz.:

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1/ See paras 182-189 of the Report of the Committee.

aldrin/dieldrin	See paragraph	2.2.1
binapacryl	" "	2.2.3
captafol	" "	2.2.3
captan	" "	2.2.3
carbaryl	" "	2.2.3
chlordane	" "	2.2.1
chlorobenzilate	" "	2.2.3
crufomate	" "	2.2.2
DDT (DDE, TDE)	" "	2.2.1
diazinon	" "	2.2.2
dichlorvos	" "	2.2.2
dimethoate	" "	2.2.2
dioxathion	" "	2.2.2
diphenyl	" "	2.2.3
diquat	" "	2.2.3
ethion	" "	2.2.2
ethoxyquin	" "	2.2.3
folpet	" "	2.2.3
heptachlor	" "	2.2.1
hydrogen cyanide	" "	2.2.3
hydrogen phosphide	" "	2.2.3
inorganic bromide	" "	2.2.3
lindane	" "	2.2.1
malathion	" "	2.2.2
orthophenylphenol	" "	2.2.3
parathion	" "	2.2.2
parathion-methyl	" "	2.2.2
phosphamidon	" "	2.2.2
piperonyl butoxide	" "	2.2.3
pyrethrins	" "	2.2.3
quintozene	" "	2.2.1
thiabendazole	" "	2.2.3

In giving the references listed below the Working Group emphasized that these methods had not always been fully checked for all substrates for which there were Codex limits so that the analyst might have to adapt the methods to his particular problem (see General Remarks). This especially held true when food-groups were mentioned rather than specific foods, e.g. item 25.20 (p.52 of Appendix II): "miscellaneous food items not otherwise specified", 27.2 (ibid p. 53) and 43.2 (ibid p.59 ): "vegetables", 62.2 and 63.2 (ibid p.67 ): "fruit", etc.

## 2.2 List of References to Suitable Methods of Analysis

This list supersedes previous lists.

### 2.2.1 Organochlorine Pesticides

(aldrin/dieldrin, chlordane, DDT-complex, heptachlor/heptachlor epoxide, lindane and quintozene).

#### General Methods and Techniques

- (a) Official Methods of Analysis of the AOAC, 11th ed. (1970), 29.001
- (b) J. Ass. Off. Anal. Chem., 54, 470 (1971)
- (c) J. Ass. Off. Anal. Chem., 55, 428 (1972)
- (d) U.S. Food & Drug Administration, Pesticide Analytical Manual, Vol. I, Section 211.14
- (e) Canadian Dept. of National Health & Welfare, Analytical Methods for Pesticide Residues in Foods, Information Canada, Ottawa (1973), Catalogue No. H 44-2869-Rev.
- (f) De Faubert Maunder, M.J. et al., Analyst, 89, 168 (1964)
- (g) Holden, A.V. and Marsden, K., J. Chromat., 44, 481 (1969)
- (h) Mills, P.A. et al., J. Ass. Off. Anal. Chem., 55, 39 (1972)
- (i) Porter, M.L. and Burke, J.A., J. Ass. Off. Anal. Chem., 56, 733 (1973)
- (j) Wood, N.F., Analyst, 94, 399 (1969)
- (k) Burke, J.A., Res. Revs., 34, 59 (1971)
- (l) Beck, H., Bundesgesundheitsblatt, 17, 269 (1974)

Other Methods

For chlordan:

- (m) Comptes Rendues of the 27th IUPAC Conference Vol. B, (Munich, August 1973), Meeting of the Commission on Pesticide Residue Analysis, App. II A, p. 310
- (n) "Chlordane", National Research Council of Canada, Associate Committee on Scientific Criteria for Environmental Quality (Panel Chairman: Dr. H.V. Morley), Ottawa (1974)

For quintozene:

- (o) Baker, P. B. and Flaherty, B., Analyst, 97, 378 (1972)

2.2.2 Organophosphorus Pesticides

(crufomate, diazinon, dichlorvos, dimethoate, dioxathion, ethion, malathion, parathion, parathion-methyl, phosphamidon)

General Methods and Techniques

- (a) Official Methods of Analysis of the AOAC, 11th ed. (1970), 29.001
- (b) *ibid.*, 29.028
- (c) J. Ass. Off. Anal. Chem., 54, 470 (1971)
- (d) U.S. Food & Drug Administration, Pesticide Analytical Manual, Vol. I, Section 211.14
- (e) Canadian Dept. of National Health & Welfare, *loc.cit.*
- (f) Abbott, D.C. et al., Pestic. Sci., 1, 10 (1970)
- (g) McLeod, H.A. and Wales P.J., J. Agr. Fd. Chem., 20, 624 (1972) for fatty samples especially
- (h) Mills, P.A. et al., J. Ass. Off. Anal. Chem., 55, 39 (1972)
- (i) Becker, G., Method S 8 in "Methodensammlung zur Rückstandsanalytik von Pflanzenschutzmitteln", Verlag Chemie GmbH, Weinheim (1974)
- (j) Watts, R.R., et.al., J. Ass. Off. Anal. Chem., 52, 522 (1969)

Other Methods

For crufomate:

- (k) Bowman, M.C. and Beroza, M., J. Ass. Off. Anal. Chem., 50, 1228 (1967)
- (l) Greenhalgh, R. Bull. Env. Cont. Tox., 7, 237 (1972)
- (m) Rice, J.R. and Dishburger, M.J., Dow Co., ACR 70.4 (1970)

For diazinon and diazoxon in animal products:

- (n) Machin, A.F. and Quick, M.P., Analyst, 94, 221 (1969)

For dichlorvos and malathion in grain:

- (o) Report of the U.K. Collaborative Panel on Dichlorvos and Malathion in Grain, Analyst, 98, 19 (1973)

For dichlorvos:

- (p) Dale, W.E., et al., J. Agr. Fd. Chem., 21, 858 (1973)
- (q) Dräger, G., Pflanzenschutz-Nachr. Bayer, 21, 373 (1968)
- (r) Elgar, K.E., et. al., Analyst, 95, 875 (1970)

For dimethoate/omethoate:

- (s) Steller, W.A. and Pasarela, N.R., J. Ass. Off. Anal. Chem., 55, 1280 (1972)

2.2.3 Other Pesticides (special methods only)

For binapacryl:

- (a) Baker, P. B. and Hoodless, R.A., Analyst, 98, 172 (1973)

For captafol/captan/folpet:

- (b) Baker, P. B. and Flaherty, B., Analyst, 97, 713 (1972)

For captan:

- (c) Canadian Dept. of National Health & Welfare, *loc. cit.*

For carbaryl:

- (d) Official Methods of Analysis of the AOAC, 11th ed. (1970), 29.066
- (e) Holden, E. R., J. Ass. Off. Anal. Che., 56, 713 (1973)
- (f) Cohen, I.C., et al., J. Chromat., 49, 403 (1970)

For chlorobenzilate:

(g) U.S. Food & Drug Administration, Pesticide Analytical Manual, Vol. II, Section 120, 218

For diphenyl:

(h) Official Methods of Analysis of the AOAC, 11th ed. (1970), 29.048 (U.V. method)

(i) Beernaert, H., J. Chromat., 77, 331 (1973) (GLC method)

(j) Vogel, J. and Deshusses, J., Mitt. Geb. Lebensm. Hyg., 56, 185 (1965)  
(GLC method)

For diquat:

(k) Calderbank, A. and Yuen, S.H., Analyst, 91, 625 (1966)

For ethoxyquin:

(l) J. Ass. Off. Anal. Chem., 51, 453 (1968)

For hydrogen cyanide:

(m) U.S. Food & Drug Administration, Pesticide Analytical Manual, Vol. II, Section 120.130

(n) Krölller, E., Method 11 in "Methodensammlung zur Rückstandsanalytik von Pflanzenschutzmitteln", Verlag Chemie GmbH, Weinheim (1974)

For hydrogen phosphide:

(o) Robinson, W.H. and Hilton, W.H., J. Agr. Food Chem., 19, 875 (1971)

(p) Berck, B., and Gunther, F.A., J. Agr. Food Chem., 18, 148 (1970)

For inorganic bromide:(\*)

(q) Heuser, S.G. and Scudamore, K.A., J. Sci. Food Agric., 20, 566 (1969)

(r) Heuser, S.G. and Scudamore, K.A., Pestic. Sci., 1, 244 (1970)

For orthophenylphenol:

(s) Mestres, R. and Chave, C., Trans. Soc. Pharm. Montpellier, 24, 272 (1965)

For piperonyl butoxide:

(t) Official Methods of Analysis of the AOAC, 11th ed., (1970), 29.145

For pyrethrins:

(u) U.S. Food & Drug Administration, Pesticide Analytical Manual, Vol. II, Section 120.128

For thiabendazole:

(v) Rajzman, A., Analyst, 99, 120 (1974)

(w) Aharonson, N. and Ben-Aziz, A., J. Ass. Off. Anal. Chem., 56, 1330 (1973)

### 3. Special Remarks

3.1 Although hexachlorobenzene is not yet yet considered at Step 9 of the Procedure, the Working Group felt that, in view of the importance of this compound, it was desirable to give recommendations for its analysis. The general procedures for organochlorine pesticides given in paragraph 2.2.1 above will not all be suitable for the analysis of hexachlorobenzene, especially if liquid - liquid partitioning is used in the clean-up step.

Suitable methods for the analysis and confirmation of hexachlorobenzene are given by:

(a) Zimmerli, B. and Marek, B., Mitt. Geb. Lebensm. Unters. Hyg., 63, 273 (1972)

(b) Collins, G.B., et al., J. Chromat., 69, 198 (1972)

3.2 The Working Group also considered whether methods of analysis always included relevant metabolites. It felt, however, that it sometimes needed further information on this point before it could make recommendations. It hoped that more information would become available from the Joint Meeting, from the IUPAC Commission on Terminal Residues or through replies to questionnaires.

3.3 The Working Group was of the opinion that Codex maximum limits should be expressed to one significant digit only.

(\*) The Working Group feels that methods giving the "total bromine content" (incl. unspecified organic bromine) are not in conformity with the recommendations given by the Joint Meeting (1971).

3.4 The Working Group considered Conference Room Document 3 submitted by the U.K. on tolerances for fatty foodstuffs. While agreeing that the recommendations made in the paper (para 10) represented the ideal aim, which could be achieved for most compounds and commodities, it was realized and accepted that for certain pesticides that are preferentially soluble in fat it was more practical to express tolerances on the fat content than on the whole product. The position taken by the Joint Meeting in making its recommendations in these circumstances is clearly set out in its reports of the 1970 (para 2.15) and 1971 (para 2.6) meetings. Summarized, the position is as follows:

meat: Maximum limits for residues of highly fat soluble compounds are expressed in the form "in the fat of meat from ...". This is stated as applying to samples of body fat removed from a carcass and analyzed on an "as received" basis. It does not apply to "rendered or extracted fat", nor to processed meat products.

milk and milk products: In view of the wide variability of the fat content of milk from different breeds of dairy cattle and also of milk-derived processed products, many different tolerances would be required to set levels appropriate to each whole commodity and much confusion would result. Therefore, for fat-soluble pesticides the only practical approach is to recommend tolerances expressed "on a fat basis". It is stated that this means that the fat content of the sample must be determined separately, by the appropriate Codex method, where available, and the observed pesticide residue content, obtained by analysis of the whole product on an "as received" basis, is expressed as if it were wholly contained in the fat.

While generally accepting the need for this pragmatic approach to a difficult problem by the Joint Meeting, the Group nevertheless expressed the view that it would still be preferable to express tolerances for milk on a "whole milk" basis rather than on a "fat basis". It was also recognized that recommendations for tolerances on "fat of poultry" posed problems in that discrete portions of fatty tissues were not always readily available for sampling purposes. Here again a "whole product" tolerance would be preferable if available data allowed this to be recommended. It was agreed that the expression of Codex maximum residue limit for meat "on extracted or rendered fat" was not acceptable. The processes involved were ill defined and prone to variation. For these reasons the Group supported the Joint Meeting policy of expressing such tolerances as "on fat of meat from ..." and suggested that the relevant Codex recommendations should be altered accordingly.

3.5 It was again considered essential that reference samples of pesticides, including relevant metabolites, should be available. The Working Group was aware of the fact that some laboratories experienced difficulties in obtaining such samples and believed that the Codex Committee on Pesticide Residues should make available a list of suitable sources of supply. The Codex Committee on Pesticide Residues could be provided with such information by Member countries by means of a questionnaire.

REPORT OF THE AD HOC WORKING GROUP ON SAMPLING 1/

The Ad Hoc Working Group on Sampling was formed prior to the 8th Session of the Codex Committee on Pesticide Residues (para 176, ALINORM 74/24). The following took part in the discussions:

A. Ambrus, Hungary  
J.A.R. Bates, United Kingdom  
G. Bressau, Federal Republic of Germany  
W.P. Cochrane, Canada  
P.A. Greve, Netherlands (Chairman)  
K. Kossmann, Federal Republic of Germany  
A. Kruysse, Netherlands  
B. Marek, Switzerland  
H.V. Morley, Canada  
T. Stijve, Switzerland  
R.H. Thompson, United Kingdom  
K. Voldum-Clausen, Denmark  
J.R. Wessel, United States of America  
L.G. Lodomery, FAO  
E.E. Turtle, FAO  
G. Vettorazzi, WHO

1. General Remarks

The Working Group first considered the document CX/PR 74/7 on "Sampling Plans for Pesticide Residue Tolerances" and the comments received from a number of Member countries. It also examined Room document 8, "EEC Commission Draft Working Paper 702/VI/75, Revision 1 on the method of sampling fruit and vegetables for the determination of pesticide residues for regulatory purposes" and the Canadian document on Sampling Guidelines as outlined in "Analytical Methods for Pesticide Residues in Foods".

The Group decided that the immediate need was for a working document limited to basic guidelines on the taking of representative samples. Since the document CX/PR 74/7 was not intended to meet this objective, the Group recommended that this paper be given further consideration at some future date. Using the EEC document and Canadian guidelines which offered a practical approach on how to obtain a representative sample for Codex purposes, the Group drafted the sampling procedure outlined below.

2. Proposed Draft Method of Sampling Foods for the Determination of Pesticide Residues (at Step 3 of the Procedure)

2.1. Objective

The purpose of sampling is to discover whether a lot being examined complies with Codex Maximum Residue Limits for Pesticide Residues. The objective of the sampling procedure is to obtain a Laboratory Sample representative of the Lot. The sample is considered representative when the procedure outlined below has been followed. The Codex limit applies to the average of the Laboratory Sample.

2.2. Definitions

2.2.1. Lot

An identifiable quantity of goods having or presumed to have common properties or uniform characteristics such as the same origin, the same variety, the same consignor, the same packer, the same type of packing or the same mark. Several Lots may make up a Consignment.

2.2.2. Consignment

A quantity of material covered by a particular consignment-note or shipping document.

2.2.3. Primary Sample

A quantity of material taken from a single place in the Lot.

1/ See paras 190, 191 of the Committee's Report.



2.2.4 Bulk Sample

Total of all the Primary Samples taken from the same Lot.

2.2.5 Laboratory Sample

Sample intended for the laboratory.

2.3 Employment of Authorized Sampling Officers

The samples shall be taken by officers authorized for the purpose by the appropriate authorities.

2.4 Sampling Procedure

2.4.1 Material to be sampled

Each lot which is to be examined shall be sampled separately.

2.4.2 Precautions to be taken

In the course of sampling and preparation of the Laboratory Sample precautions shall be taken to avoid contamination of the samples or any other changes which would adversely affect the analytical determinations.

2.4.3 Primary Samples

As far as possible primary samples should be taken at various places throughout the Lot. The minimum number of Primary Samples to be taken is given in the tables below. As far as possible the samples should be of similar size. The total weight of the samples shall never be less than that required for the Laboratory Sample as listed in 2.4.5. (\*) The authorized sampling officer can use either of the following schemes:

For prepackaged goods:

Number of packages in the Lot	Minimum Number of Primary Samples to be taken
1 - 10	1
11 - 100	5
101 - 500	10
> 500	20

For loose goods: 1/

Weight of the Lot in kilogrammes	Minimum Number of Primary Samples to be taken
< 50	3
51 - 500	5
501 - 2000	10
> 2000	20

2.4.4 Bulk Sample

The Bulk Sample is made up by uniting and mixing the Primary Samples. It may be sent to the laboratory as it stands in which case it constitutes the Laboratory Sample. If the Bulk Sample is too large the Laboratory Sample may be prepared from it by a suitable method of reduction. In this process, however, individual fruits and vegetables must not be cut.

(\*) Where several Laboratory Samples are required the total number/weight of the Primary Samples must be increased accordingly. National authorities may require the Laboratory Sample to be subdivided for legal purposes.

1/ For whole cereals and other materials shipped in bulk alternative, well established, sampling programmes are also available.

2.4.5 Laboratory Sample

The minimum amount of material to be submitted to the laboratory is shown below.

Food	Minimum sample weight	Minimum number of units
<u>small fruits and vegetables</u> (unit weight up to ca. 25 g)	1.5 kg	-
e.g. beans berries Brussels sprouts cherries peas		
<u>medium sized fruits and vegetables</u> (unit weight between ca. 25 and ca. 250 g)	1.5 kg	10
e.g. apples apricots carrots oranges potatoes		
<u>large fruits and vegetables</u> (unit weight over ca. 250 g)	1.5 kg	3
e.g. cabbages cauliflowers melons pumpkins		
<u>dairy products</u>		
whole milk	1 kg	-
cheese	1 kg	-
butter	1 kg	-
cream	0.5 kg	-
<u>eggs</u>	0.5 kg	10 (if whole)
<u>poultry, fish and other animal products</u>	1 kg	-
e.g. raw fat raw meat raw fish prepared meat fish products		
<u>vegetable oils and fats</u>	0.5 kg	-
e.g. cotton seed oil soya bean oil margarine		
<u>cereals and cereal products</u>	1 kg	-

2.5 Packaging and Transmission of Samples

The Laboratory Sample should be placed in a clean inert container offering adequate protection from external contamination and protection against damage in transit. The container should then be sealed and sent to the laboratory as soon as possible, taking any necessary precautions against spoilage, e.g. frozen foods should be kept frozen, perishable samples should be kept cooled or frozen. Each sample must be accompanied by a note giving the nature and origin of the sample and the date and place of sampling, together with any additional information likely to be of assistance to the analyst.

N.B.: If, for any reason, there has had to be a departure from the above procedure, especially para 2.4, full details of the procedure actually followed shall also be stated in the note.

Survey of the Relationship Between the FAO/WHO Joint Meeting on Pesticide Residues and the Codex Committee on Pesticide Residues <sup>1/</sup>

(Working paper prepared by an ad hoc Working Group)

Introduction

At the Seventh Session of the Codex Committee on Pesticide Residues, a statement was presented regarding the relationship between the FAO/WHO Joint Meeting on Pesticide Residues and the Codex Committee on Pesticide Residues. This statement was prepared cooperatively by several national delegations present at the Seventh Session. The statement taken from ALINORM 74/24 (paragraphs 188 through 191) are as follows:

188. Since the beginning of the Codex Committee on Pesticide Residues the recommendations of the FAO/WHO Joint Meeting on Pesticide Residues regarding ADIs, pesticide residue tolerances, practical residue limits and analytical methods have served as the scientific basis of the work of the Codex Committee on Pesticide Residues. The valuable assistance rendered by this expert body is sincerely appreciated. Over the years of the work of the Codex Committee on Pesticide Residues the need for expert assistance has increased. This increase has been due in part to additional interest on the part of more nations and increased demands for ADIs and Codex maximum pesticide residue limits.

189. During the sessions of the Codex Committee on Pesticide Residues, we have considered several hundred proposed pesticide residue limits. There has been difficulty on the part of nations in concurring with the proposed limits. In addition, on several occasions the Committee has found it necessary to recommend that matters be returned to the Joint Meeting for further clarification or for review and justification. In some instances the action was based on the availability of new data, in other instances the information made available to the Joint Meeting appeared not to have been complete. One of the major points within the Committee that appears to contribute to the difficulty in nations accepting proposed residue limits is the lack of information on the agricultural practices that are involved in the establishment of Codex maximum residue limits as recommended by the Joint Meeting. Another factor appears to be the lack of clear criteria for the establishment of ADIs and maximum residue limits. These problems are understandable when one considers the limited number of members on the Committees of the Joint Meeting on Pesticide Residues due to budgetary limitations.

190. We are aware of some of the problems facing the members of the Joint Meeting on Pesticide Residues. We believe that members of the Codex Committee on Pesticide Residues can be of assistance in many areas. We further believe that the Codex system of national contact points can be better utilized for acquiring information from member nations on toxicology, use pattern, residue data and tolerances so that monographs on pesticide become more fully documented. We respectfully suggest that the Chairman consider the establishment of an appropriate body, within the Codex Committee on Pesticide Residues, to study the relationship between the Joint Meeting and the Codex Committee and to work with the Joint Meeting on the problems outlined above and any other where joint action may be beneficial. We believe that this action is necessary to improve the efficiency of both groups.

191. The Committee accepted the statement of the delegation of the USA and requested governments to send their observations on the existing working procedures and relationship between the Joint Meeting and the Committee. The delegation of the USA agreed to prepare a paper on the basis of government comments for the next session of the Committee. The Committee agreed that a small Ad Hoc Working Group could meet prior to the 8th session to discuss the US working paper, should this prove necessary. The delegations of the Netherlands, Israel, Canada, the Federal Republic of Germany and Australia expressed their interest in participating in this work."

<sup>1/</sup> See para. 213 of the Report of the Committee.

Replies to a Questionnaire distributed to Governments

In consultation with other national delegations, a series of questions were developed to elicit information that could be utilized in the evaluation of the relationship between the Joint Meeting and the Codex Committee on Pesticide Residues. Responses were received from thirteen national delegations. Based on the responses, the following summation can be made regarding each question:

1. Do you receive the Report of the Joint FAO/WHO Meeting and the Evaluations of Some Pesticide Residues in Food (FAO Monograph) in time for adequate study before the Session of the Codex Committee on Pesticide Residues ?

The reports of the Joint Meeting on Pesticide Residues and the Monographs usually do not arrive in time for adequate review and consideration before a delegation is requested to comment on the pesticide residue levels suggested by the Joint Meeting.

2. Are the Reports and Monographs of assistance in framing your country's comments to the Codex Committee on Pesticide Residues ?

There was general agreement that the Reports and Monographs are useful as source documents in the preparation and consideration of national viewpoints on proposed pesticide residue levels. Data on pre-harvest intervals are often omitted. At times it has been difficult to justify the conclusions on the basis of the data presented. The WHO aspects of the reports were cited as being very useful in evaluating the human health aspects of the pesticide.

3. Do you find the format of the Monographs satisfactory ?  
If not, please suggest a format that would be more useful.

The format being used in the Reports and Monographs are satisfactory. No suggestions were received for changes. It was suggested by some countries that individual monographs may permit more prompt publication.

4. Are the data in the Monographs in sufficient detail for your purposes ?  
If not, what additional detail do you feel would be helpful ?

The degree of detail in the Monographs is satisfactory to several respondents. Others indicated a need for more information, particularly for information not generally available in the published literature. Requests were made for a clearer relationship between the values suggested and the good agricultural practices of the nation where the data originated. The geographical limitation of the data was cited as a matter of concern and cited as an illustration of the need for more nations to provide data for consideration.

5. Are you satisfied with the procedures used by the Joint Meeting in arriving at recommendations for maximum residue limits ? If not, please suggest changes you feel are needed.

Regarding the procedures used by the Joint Meeting in arriving at their recommendations, there was general agreement that the procedures are sound. It was generally recognized that the Joint Meeting is limited by the amount of data they have for consideration. The quantity and quality of the data needs to be improved. There is a lack of input from the governments. Often the data originates from experimental trials which may or may not be representative of good agricultural practice. The relationship of the data considered and good agricultural practices is not clear in many instances. It was suggested that an expanded data base together with an expanded Secretariat would enable the Joint Meeting to improve the quality of their decisions.

6. Are you satisfied with the deductions made from the data available to the Joint Meeting ? If not, please suggest how the deductions may be improved.

As a general rule, it was felt that the deductions made by the Joint Meeting appear to be reasonable and based on the data available for their evaluation. As in the responses to the previous question, several nations pointed out the need for greater participation by governments in the development and provision of data. While there was general agreement regarding the deductions made from the data in the Monographs, it was pointed out that on occasion the theoretical daily intake, based on the suggested tolerances, far exceeded the acceptable daily intake when calculated from the toxicology data.

7. If you feel that the supply of information going to the Joint Meeting is not adequate, how would you suggest that the information be increased and made more representative of the worldwide use patterns ?

It was agreed that the supply of information going to the Joint Meeting is inadequate. Some responses indicated that nations did not appreciate the need for greater participation. Some nations are not in a position to participate more fully. A special Codex pesticide contact point in each nation was suggested as a means of centralizing requests and responsibility. A standardized format for data presentation, to be developed by the FAO Secretariat, was suggested as a means of encouraging the submission of data. The strengthening of the Secretariat was cited as necessary to permit increased processing of submitted data as well as better communication with the Codex Pesticide Contact points.

8. If you do not provide data reflecting use patterns, results of trials, or residue surveys, would you be willing to do so ?

All nations indicated that they would be willing to provide data to the Joint Meeting. Several nations pointed out that they are doing this at the present time.

9. Does your country comment in writing to the Directors General of FAO and WHO regarding the Reports and Monographs ?

In general, the responses indicated that the nations are not corresponding with the Directors-General of FAO and WHO regarding the Reports and Monographs. Two nations have commented in the past and they will continue to do so.

10. Does your country provide information and data on the compounds suggested for review by the Codex Committee on Pesticide Residues ?

The response was similar to that indicated in number eight above.

11. When a pesticide is to be considered by the Joint Meeting, or to be reconsidered for a specific reason, have you been asked for information and data ? If not, would you be willing to provide data ?

Nations have been asked to provide information for those compounds that are being considered. The requests have been in the form of the Circular Letters that are issued by the Codex Secretariat. All nations indicated a willingness to supply information. However, in many instances, the requested information can come primarily from the manufacturer of the pesticide. A request can be made of the manufacturer, but this is no guarantee that the data will be supplied. No general programme appears to be available for the development of this information when the industrial sector does not provide the data requested.

12. Does your country endeavour to initiate activities with a view to obtaining new data for this purpose ?

The Monographs have indicated under "further work required" the types of information that is required to permit the Joint Meeting to evaluate a pesticide. It was pointed out that many times the pesticide is either very close to the expiration of the patent period or may have already exceeded the period of patent protection. In such a case, there is little incentive for the manufacturer to expend funds to provide the requested information. Some nations undertake studies to provide the information. It was suggested that consideration be given to the establishment of a special fund for financing the research. The International Union of Pure and Applied Chemistry has undertaken research in certain areas the results of which have been of value to the Joint Meeting.

13. Would your office, or an office designated by your country, be willing to serve as an advisor to the Joint Meeting, at no cost to the Joint Meeting? The function of the advisor would be to collect and collate the information on the specific pesticide under study by the Joint Meeting for your country.

Most nations indicated their agreement to serve as a cost-free advisor to the Joint Meeting. It was pointed out that the establishment of the Codex Pesticide contact point in each country would help to serve as a focal point for such a programme. Several countries pointed out that experts from their country had served on the Joint Meeting. A question was raised as to whether or not the "advisor" could better serve in supplying the information than those already engaged in the programme.

14. If it were decided that the Monographs were to be produced in some sort of draft form so they could be reviewed by national representatives to determine if all of the relevant data had been included, would you be agreeable to such a plan? Would you agree to serve as a reviewer or to be responsible for someone in your country to serve as a reviewer?

The suggestion of a review programme of draft monographs was rejected almost uniformly. The possibility of such a programme delaying even further the publication of the monographs seemed to be the main reason for rejection.

15. Would your country be willing to support an item on the agenda of an appropriate governing body to review the programmes of FAO and WHO, including the support provided these programmes?

Two nations indicated that they would not support an agenda item for the review of the programmes of FAO and WHO, including the support of the programmes. Another nation did not reply to the question. The action taken at the Seventh Session of the Codex Committee on Pesticide Residues was cited and suggested that the proposed conference should be convened at reasonable and feasible intervals. The 17th Session of FAO was indicated as expressing their reservations on the postponement of the meeting of the Committee of Experts on Pesticides in Agriculture. It was suggested that the Committee of Experts could serve as a kind of an Executive Committee for a conference to review the FAO/WHO pesticide programmes.

16. Is your country in favour of tolerances being established on:
- Individual raw agricultural commodities? (For example: Wheat, corn, apples, lettuce, etc.)
  - Groups of commodities? (For example: Cereals, fruit, root crops, leafy vegetables, etc.)
  - Combination of both individual raw agricultural commodities and groups of commodities? (For example: Cereals, apples, pears, root crops except carrots, carrots, rice, etc.)

There was a variation in the type of tolerances favoured by the nations. While it was recognized that it may be desirable to have only one type of a tolerance, nevertheless the combination of individual tolerances and group tolerances were preferred by most.

17. Would you be willing to provide the Codex Committee on Pesticide Residues with a listing of agricultural commodities and pesticides of interest to you, from the standpoint of international commerce, so that a coordinated list could be provided to the Joint Meeting for their consideration?

The ongoing study of the delegation of Canada was cited as a good example of a list of agricultural commodities of interest to the participating nations. Several nations indicated that they had already provided the Codex Committee on Pesticide Residues with lists in the context of priority lists. In general, there was agreement that such lists could be provided where they are needed.