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FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS

JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES
Forty-fifth meeting, Geneva, 6-15 June 1995

SUMMARY AND CONCLUSIONS

A Joint FAO/WHO Expert Committee on Food Additives (JECFA) meeting was held in Geneva, Switzerland, from 6 to 15 June 1995. Professor J.G. McLean, Pro Vice-Chancellor, Swinburne University of Technology, Hawthorn, Victoria, Australia, served as Chairman and Dr J. Boisseau, Director, National Laboratory of Veterinary Drugs, Fougères, France, served as Vice-Chairman.

Dr J. Paakkanen, Food Quality Liaison Group, Food and Nutrition Division, Food and Agriculture Organization of the United Nations, and Dr J.L. Herrman, International Programme on Chemical Safety, World Health Organization, served as Joint Secretaries.

The present meeting was the forty-fifth in a series of such meetings and was the eighth JECFA meeting convened to deal exclusively with residues of veterinary drugs in food. The primary tasks before the Committee were to further elaborate principles for evaluating the safety of residues of veterinary drugs in food and for establishing acceptable daily intakes (ADIs) and maximum residue limits (MRLs) for certain drugs when they are administered to food-producing animals in accordance with good practice in the use of veterinary drugs.

The report of the meeting will appear in the WHO Technical Report Series. Its presentation will be similar to that of previous reports, namely, general considerations, specific comments on substances on the agenda, and recommendations. The report will include annexes containing a detailed table (similar to Table 1 in this report) summarizing the conclusions reached by the Committee after its evaluations of the substances on the agenda.

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Toxicological monographs summarizing the data that were considered by the Committee in assessing the safety of the substances on the agenda will be published in WHO Food Additives Series No. 36. Residues monographs summarizing the data that were considered by the Committee in establishing MRLs will be published in FAO Food and Nutrition Paper Series No. 41/8.

NOTE

This document has been published prior to the publication of the full report of the forty-fifth meeting of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) to ensure the fast dissemination of information, in particular to the Codex Alimentarius Commission, to which JECFA is the scientific advisory body on matters relating to residues of veterinary drugs in food.

The FAO and WHO Joint Secretaries of JECFA request that further inquiries regarding the compounds evaluated at the forty-fifth meeting be made only after the full official report has been published and distributed by WHO in the name of both sponsoring Organizations, FAO and WHO. Your cooperation is very much appreciated.

Table 1: Recommendations on compounds on the agenda

Substance	Acceptable daily intake (ADI) and other toxicological recommendations	Recommended maximum residue limit (MRL)
Anthelmintic agents		
Abamectin	0-0.2 µg per kg of body weight ^a	No MRLs recommended ^b
Doramectin	0-0.5 µg per kg of body weight	Muscle (cattle): 10 µg/kg ^{c,d} Liver (cattle): 100 µg/kg ^{c,d} Kidney (cattle): 30 µg/kg ^{c,d} Fat (cattle): 150 µg/kg ^{c,d}
Moxidectin	0-2 µg per kg of body weight	Muscle (cattle, sheep & deer ^e): 20 µg/kg ^{c,f} Liver (cattle, sheep & deer ^e): 100 µg/kg ^{c,f} Kidney (cattle, sheep & deer ^e): 50 µg/kg ^{c,f} Fat (cattle, sheep & deer ^e): 500 µg/kg ^{c,f}
Febantel, fenbendazole, and oxfendazole	0-4 µg per kg of body weight ^g	Muscle, kidney & fat (cattle, pigs & sheep): 100 µg/kg ^{h,i} Liver (cattle, pigs & sheep): 500 µg/kg ^{h,i} Milk (cattle): 100 µg/l ^{h,i}
Antimicrobial agents		
Ceftiofur sodium	0-50 µg per kg of body weight	Muscle (cattle & pigs): 200 µg/kg ^j Liver (cattle & pigs): 2000 µg/kg ^j Kidney (cattle & pigs): 4000 µg/kg ^j Fat (cattle & pigs): 600 µg/kg ^j Milk (cattle): 100 µg/l ^j
Chlortetracycline and tetracycline	0-3 µg per kg of body weight ^k	Muscle (cattle, pigs & poultry): 100 µg/kg ^{c,h} Liver (cattle, pigs, sheep & poultry): 300 µg/kg ^{c,h} Kidney (cattle, pigs, sheep & poultry): 600 µg/kg ^{c,h} Eggs (poultry): 200 µg/kg ^{c,h}
Oxytetracycline	0-3 µg per kg of body weight ^k	Giant prawn (<i>Penaeus monodon</i>): 100 µg/kg ^{c,h}
Antiprotozoal agent		
Diclazuril	0-20 µg per kg of body weight ^l	Muscle (sheep, rabbits & poultry): 500 µg/kg ^{c,m} Liver (sheep, rabbits & poultry): 3000 µg/kg ^{c,m} Kidney (sheep, rabbits & poultry): 2000 µg/kg ^{c,m} Fat (sheep, rabbits & poultry): 1000 µg/kg ^{c,m}

NOTES

- a. The ADI for abamectin was established by the 1994 Joint FAO/WHO Meeting on Pesticide Residues (JMPR; Report: FAO Plant Production and Protection Paper 127, 1995; Toxicological monograph: WHO/PCS/95.2, 1995).
 - b. Several issues relating to differences in approaches used by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and JMPR for recommending MRLs in animal products arose at the meeting. In addition, the ADI established by JMPR for abamectin used an increased safety factor to take into account the Δ -8,9 isomer, a metabolite that is not present in animal products. Therefore, the Committee did not recommend MRLs for abamectin used as a veterinary drug and recommended that consultations be held between representatives of JECFA and JMPR to resolve the ADI and MRL issues.
 - c. Expressed as parent drug.
 - d. The Committee noted the high concentration of residues at the injection site during the 35-day period after parenteral administration of the recommended dose.
 - e. Temporary MRL for deer (see Table 2).
 - f. The Committee noted very high concentrations and great variation in the level of residues at the injection site over a 49-day period after dosing cattle.
 - g. Group temporary ADI for febantel, fenbendazole and oxfendazole, based on the no-observed-effect level (NOEL) for oxfendazole identified at the thirty-eighth meeting of the Committee (WHO Technical Report Series, No. 815, 1991; see Table 2).
 - h. Temporary MRL (see Table 2).
 - i. Determined as the sum of fenbendazole, oxfendazole and oxfendazole sulfone, expressed as oxfendazole sulfone equivalents.
 - j. Expressed as desfuoylceftiofur.
 - k. Group ADI for chlortetracycline, oxytetracycline and tetracycline, based on the NOEL for oxytetracycline identified at the thirty-sixth meeting of the Committee (WHO Technical Report Series, No. 799, 1990).
 - l. Temporary ADI (see Table 2).
 - m. MRL is temporary because the ADI is temporary.
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Table 2: Further toxicological studies and other information required or desired

Anthelmintic agents

Moxidectin

The following information is required for evaluation in 1998:

- Further information on the marker compound for deer tissues.

Febantel, fenbendazole and oxfendazole

The following information is required for evaluation in 1998:

- The results of a teratogenicity study in rabbits, using oxfendazole at sufficiently high doses to explore adequately its teratogenic potential in this species.
- The results of ongoing residue depletion studies for total residues of fenbendazole, oxfendazole and oxfendazole sulfone using febantel and oxfendazole in cattle and sheep.

Antimicrobial agents

Chlortetracycline and tetracycline

The following information is required for evaluation in 1996:

- The results of residue depletion studies in milk (cattle), in fat of cattle, pigs and poultry, and in muscle, liver, kidney and fat of sheep in accordance with approved uses of these substances.
- New and validated methods of analysis for chlortetracycline, oxytetracycline and tetracycline.

Oxytetracycline

The submission of a validated analytical method for the determination of oxytetracycline in prawns is required for review in 1996.

Antiprotozoal agents

Diclazuril

The following information is required for evaluation in 1998:

- The results of a teratogenicity study in rabbits supported by evidence that sufficiently high doses were administered to explore adequately the teratogenic potential of diclazuril in this species.
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