Book review — Boekresensie

Evaluation of certain veterinary drug residues in food

1998. WHO Technical Report Series 879, Geneva, 74 pp., paperback. Price Sw.fr. 16, (Sw.fr. 11.20 in developing countries). ISBN 92 4 120879 1.

This publication is the 48th report of the joint FAO/WHO expert committee on food additives, and presents conclusions reached on the safety of certain veterinary drug residues in foodstuffs. The expert committee was set up to provide guidance to FAO and WHO member states on veterinary drug residue issues. Part of the work of the committee is to recommend appropriate maximum residue limits (MRLs) for each drug and its metabolites and this report sheds some light on how these limits are determined.

For each veterinary drug a MRL is set in every species routinely treated with that drug and different MRLs are specified for different organs (liver, kidney, muscle and skin/fat). The MRL is the maximum allowable level of a drug in a specific organ of an animal at the time of slaughter if that animal is to be considered fit for human consumption. Animal products such as milk and eggs are also allocated MRLs.

This particular report deals with 13 veterinary drugs: 2 anthelmintics (moxidectin and tiabendazole), 8 antimicrobials (ceftiofur, danofloxacin, dihydrostreptomycin, streptomycin, enrofloxacin, flumequine, gentamicin and spiramycin), 1 glucocorticosteroid (dexamethasone) and 2 insecticides (cyfluthrin and fluazuron).

The drugs are discussed under the categories: toxicological data, residue data, maximum residue limits, microbiological data (where applicable) and analytical methods. Not all categories are covered for every drug, as there are cases where the data have been presented before or where data are as yet unavailable. Gentamicin, spiramycin and dexamethasone are touched on only briefly, while the other drugs are dealt with more thoroughly.

Toxicological information on the drugs is provided in detail, with descriptions of the actual experiments carried out and discussion of the results. The sections on residue data cover topics such as drug metabolism in the target animal and distribution of the drug (or metabolites) in the various organs after administration. Microbiological information relevant to human intestinal flora is presented for the antimicrobial agents. Toxicological data and/or antimicrobial activity are used to determine the ADI (acceptable daily intake) for each drug. This, together with residue data and any other relevant information, is used to determine an appropriate MRL for each organ, as discussed under the heading 'Maximum residue limits'. Analytical methods are briefly summarised without experimental detail.

A summary of the committee's recommendations on each of the veterinary drugs listed above is included at the end of the report.

There is growing awareness in South Africa of the importance of residue issues. Programmes such as the Directorate of Veterinary Public Health's National Agricultural Residue Monitoring Programme for food of animal origin, are being implemented. Residue monitoring is important from the point of view of increasing food safety for local consumers and for export certification.

This publication will be useful to anyone working in the area of veterinary drug residues, be they administrators, toxicologists or analysts. To those with a specific interest in the drugs discussed or those who want to learn how values for ADI and MRLs are established, this report can also be recommended.

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