

codex alimentarius commission E



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



JOINT OFFICE: Viale delle Terme di Caracalla 00153 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

Agenda Item 3

CX/RVDF 09/18/3 Add. 1
April 2009

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON RESIDUES OF VETERINARY DRUGS IN FOODS

Eighteenth Session

Natal, Brazil, 11 – 15 May 2009

MATTERS OF INTEREST ARISING FROM OTHER INTERNATIONAL INTERGOVERNMENTAL ORGANISATIONS

(Submitted by the International Atomic Energy Agency)¹

1. Since 1964, the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture has been in a unique position to promote the mandates of both FAO, in its efforts to eliminate world hunger and reduce poverty through sustainable agricultural and rural development, improved nutrition and food security, and the IAEA, through peaceful uses of atomic energy to accelerate and expand the contributions of nuclear technologies to promote global health and prosperity.

2. The mission of the Joint FAO/IAEA Programme of Nuclear Techniques in Food and Agriculture is to strengthen capacities for the use of nuclear methods to improve technologies for sustainable food security and to disseminate these techniques and knowledge through international activities in research, training and outreach in its Member States. The Joint FAO/IAEA Programme is subdivided into four major sub-programmes on sustainable intensification of crop production systems, sustainable intensification of livestock production systems, sustainable control of major insect pests and improving food and environmental safety. The FAO/IAEA Agriculture and Biotechnology Laboratory (Seibersdorf) and the IAEA Marine Environment Laboratory (Monaco) play key roles in supporting the Joint FAO/IAEA Programme.

3. The Food and Environmental Protection Section of the Joint FAO/IAEA Division and the Agrochemicals Unit of the FAO/IAEA Agriculture and Biotechnology Laboratory implement the food and environmental safety subprogramme. The subprogramme provides assistance in four main areas, namely, coordinating and supporting research, providing technical and advisory services, providing laboratory support and training, and collecting, analyzing and disseminating information, primarily in areas related to the use of ionizing radiation, pesticide and veterinary drug residues, and radioactive contamination of foodstuffs.

4. Highlights of some Food and Environmental Protection Subprogramme activities are as follows:

COORDINATED RESEARCH PROJECT ON THE DEVELOPMENT OF RADIOMETRIC AND ALLIED ANALYTICAL METHODS TO STRENGTHEN NATIONAL RESIDUE CONTROL PROGRAMS FOR ANTIBIOTIC AND ANTHELMINTIC VETERINARY DRUG RESIDUES

5. The IAEA encourages and assists research on the development and practical application of peaceful uses of nuclear techniques to foster the exchange of scientific and technical information. IAEA coordinated research activities are designed to stimulate and coordinate the undertaking of research by scientists in IAEA Member States in selected nuclear fields. These coordinated research activities are normally implemented through Coordinated Research Projects (CRP) that join together research institutes in both developing and

¹ Document prepared by and under the responsibility of the IAEA.

developed Member States to collaborate on research topics of mutual interest and priority. The research that is supported encourages the development, acquisition and dissemination of new knowledge and technology generated through the use of nuclear technologies and isotopic techniques in the various fields of work covered by the IAEA mandate.

6. In this regard, a new CRP on the *Development of Radiometric and Allied Analytical Methods to Strengthen National Residue Control Programs for Antibiotic and Anthelmintic Veterinary Drug Residues* has been initiated. The project was developed after extensive consultation with stakeholders, including regulatory and scientific expert authorities in Member States, to identify areas of priority and concern to less developed countries.

7. The main purpose of the CRP is to assist FAO and IAEA Member State laboratories in meeting the need for effective and appropriate monitoring methods for residues of selected antibiotic and anthelmintic veterinary medicines. Multi-analyte immunochemical screening methods utilizing radioactive tracers and physico-chemical screening techniques, including High Performance Thin Layer Chromatography (HPTLC) with optical scanning and/or autoradiography, will be developed. Confirmatory assays meeting the requirements of regulatory authorities will also be developed and validated.

8. In order to promote effective intervention policies to prevent/minimize drug resistance, emphasis will be placed on anti-parasitic drugs widely used in developing countries, such as benzimidazoles and macrocyclic lactones, and compounds highlighted by the Joint FAO/WHO/OIE Expert Meeting on Critically Important Antimicrobials² (Rome, Italy, 26-30 November 2007), including widely used antibiotics such as aminoglycosides, cephalosporins, macrolides, quinolones, sulfonamides and tetracyclines.

9. More than twenty proposals have been received to date from developing countries to participate in the project as research contract holders, and up to eight research contracts will be awarded. Research agreements will also be awarded to leading scientists that will provide guidance and technical expertise to the research contract holders. The first Research Coordination Meeting under this project will be held in Vienna from 19-23 October 2009.³

QUALITY CONTROL OF TRYPANOCIDAL DRUGS

10. African trypanosomiasis is a severe disease which is fatal if left untreated. The conventional and most common method to combat trypanosomiasis is by chemotherapy. It is known that there is widespread marketing and use of counterfeit and poor quality isometamidium-based trypanocidal drugs in sub-Saharan Africa. This has severe implications for both food safety and animal health, posing problems with residues of unspecified, unwanted chemicals and their metabolites in the food chain and the induction of trypanosome resistance, an already widespread phenomenon.

11. The Animal Health Service of the FAO, the International Federation for Animal Health and the United Nations Industrial Development Organisation have signed a Memorandum of Understanding to address these issues. The FAO Animal Health Service, in partnership with the Joint FAO/IAEA Division and the International Federation for Animal Health, cooperate to develop standards and protocols for quality control/quality assurance for trypanocidal drugs and other classes of veterinary drugs, including insecticides, acaricides and anthelmintics. The United Nations Office of Drugs and Crime (UNODC) and Strathclyde University are also associated with this initiative.

12. The purpose of the Project is to provide validated protocols for drug quality control to the relevant regulatory bodies in countries where these drugs are used. The establishment of standards for drug quality and protocols for their assessment will allow pharmaceutical companies and laboratories, including local/small companies, to market and compete on an equal basis following internationally agreed quality control/quality assurance protocols.

FAO AND IAEA TECHNICAL COOPERATION PROJECTS

13. The Food and Environmental Protection Subprogramme is responsible for providing scientific and technical support for over 40 national and regional FAO and IAEA Technical Cooperation (TC) Projects, including several associated with veterinary drug residues (see Table 1). These projects provide recipient

² Please see http://www.who.int/foodborne_disease/resources/Report_CIA_Meeting.pdf for details.

³ Please see <http://www.naweb.iaea.org/nafa/fep/news-fep.html> for details.

countries with equipment, expert advice and training, and are financed by both the FAO and IAEA Technical Cooperation Programmes and through trust funds provided by donor countries and international funding agencies.

METHODS OF ANALYSIS FOR RESIDUES OF VETERINARY DRUGS IN FOODS

14. Many developing country Member States have indicated difficulties in accessing appropriate analytical methods, especially in the form of validated method protocols. To help address this problem, the Food and Environmental Protection Subprogramme has collaborated with the Codex Committee on Pesticide Residues in publishing analytical methods made available by National Authorities on its web pages. To date, pesticide residue methods have been made available by Canada, Germany, The Netherlands, the United States and others.⁴

15. Depending on CCRVDF discussions concerning the further consideration of methods of analysis for residues of veterinary drugs in foods (Agenda Item 7), the Joint Division could also include analytical methods for veterinary drug residues on the Subprogramme web pages. We are of the opinion that the submission of methods, including full protocols of validated methods or links to method protocols, could enhance the capabilities of developing countries to identify and implement suitable methods in support of residue monitoring plans.

⁴ Please see <http://www-naweb.iaea.org/nafa/fep/News-Main-page.pdf> for details.

TABLE 1: TECHNICAL COOPERATION PROJECTS RELATED TO RESIDUES OF VETERINARY DRUGS⁵

Country	Title	Objective
Algeria	Strengthening Capabilities to Control Veterinary Drug Residues in Foodstuffs	To improve consumer protection and facilitate trade through increased capacity in the determination of veterinary drug residues in foods
Angola	Veterinary Drug Residue Monitoring Programme	To establish a capability to determine veterinary drug residues in livestock products.
Benin	Veterinary Drug Residue Monitoring Programme	To develop a capacity for veterinary drug residue monitoring in livestock products.
Bangladesh	Establishing a Veterinary Drug Residue Laboratory	To establish a laboratory complying with international standards for surveillance of veterinary drug residues and prohibited substances in food of animal origin.
Burkina Faso	Regulatory Control and Monitoring of Contaminants and Residues	To strengthen the technical capabilities of the National Public Health Laboratory (LNSP) in analysis, monitoring and surveillance of food and the environment by establishing an improved quality process and procedures to perform residue analysis in foodstuffs to comply with international standards
Chile	Certification of Exported Animal Products Using Nuclear and Other Analytical Techniques	To strengthen the analytical capabilities of laboratories authorized to certify exported animal products to support the national programme on control of chemical residues, in order to comply with international standards, harmonize measurement results and promote mutual recognition agreements on product certification.
Eritrea	Zoonotic Disease Control and Analysis of Veterinary Drug Residues in Foods	The objective of the project is to determine the epidemiological prevalence of brucellosis and tuberculosis in the major dairy producing areas, and; baseline data on veterinary drug residues in milk and meat products.
Indonesia	Enhancement of Quality Assurance for the Analysis of Veterinary Drug Residues	To enhance the national capacity to ensure the safety of food products of animal origin.
Mongolia	Monitoring of Residues in Livestock Products and Surveillance of Animal Diseases	To develop a capacity for veterinary drug residue and contaminant monitoring in livestock products and to expand serosurveillance capabilities to achieve rinderpest and foot and mouth disease (FMD) free status in the country or specific zones.
Nicaragua	Determining Drug Residues in Bovine Meat Exports	To determine veterinary medicine residues and growth promoters through nuclear and complementary techniques to improve production, product quality and diagnostic techniques.
Nigeria	Monitoring Veterinary Drug Residues in Livestock Products	To develop an effective control system for public health protection appropriate for the monitoring and regulation of veterinary drug residues in livestock and seafood products through capacity building and improved quality.
Sri Lanka	Monitoring of Chemical Residues and Food-borne Pathogens	To extend the residue screening and testing capability through upgrading the food microbiology laboratory for monitoring of the nitrofurans group of residues and food-borne pathogens.
Zambia	Establishment of a Veterinary Drug Residue Monitoring Facility at The Central Veterinary Research Institute	To safeguard the national and international consumer as part of the food safety initiative set up by the government.
Latin America (regional)	Establishing a South American Regional Network of National and Reference Laboratories for Pharmacologically Active Substances and Contaminants in Foods of Animal Origin	To establish a network of Latin American National Laboratories and Centres of Excellence by introducing harmonized procedures for the analysis of pharmacologically active substances and contaminants in food of animal origin.

⁵ Please see complete Technical Cooperation Project listing under <http://www-naweb.iaea.org/nafa/fep/field-projects-fep.html>