



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

**Twentieth Session**

*San Juan, Puerto Rico, 7-11 May 2012*

**DATABASE ON THE NEED FOR MRLS FOR DEVELOPING COUNTRIES**

(Report of the CCRVDF Electronic Working Group on Veterinary Drugs of Potential Interest to Developing Countries, prepared by the United States of America with the assistance of Algeria, Argentina, Brazil, Canada, Chile, China, Costa Rica, France, Mexico, Morocco, The Netherlands, Philippines, Thailand, FAO, WHO and IFAH)

***Background***

1. At the 19<sup>th</sup> Session of the Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF, Burlington, Vermont, USA, 30 August – 3 September, 2010), the Committee agreed to establish an electronic working group, led by the United States and open to all interested members and observers and working in English only. The Committee charged the electronic working group to:

- (i) continue developing and maintaining the database of Veterinary Drugs of Potential Interest to Developing Countries;
- (ii) identify data gaps and sources of data; and
- (iii) solicit support and identify potential sponsors to allow inclusion in the priority list of veterinary drugs of interest for developing countries.

***Proceedings of the electronic Working Group***

2. The electronic Working Group worked through email. In continuing to develop and maintain the database of drugs of potential interest to developing countries, the electronic Working Group:

- a) added the veterinary drugs requested by the 19<sup>th</sup> Session of the CCRVDF (REP11/RVDF, paras 47, 80);
- b) removed veterinary drugs for which Codex Maximum Residue Limits (MRLs) had been established in the same species and tissue requested;
- c) reorganized the database to list each veterinary drug per species in which Codex MRLs were requested;
- d) combined usage, dosage regimen, product label information, and national authority information into one column titled “Good Practice in the Use of Veterinary Drugs (GPVD);”
- e) added information on previous JECFA evaluation and ADI status;
- f) included the name of some member countries where national MRLs have been established; and
- g) collected additional information from Member Countries.

3. In support of the work of this electronic working group, the Chair of the CCRVDF sent a letter to all Codex Contact Points requesting information on which veterinary drug MRLs were most needed in their country. A request form asking for the top three veterinary drugs in need of Codex MRLs was included with the Chair’s letter. The request form was also circulated within the electronic Working Group. In response to the Chair’s letter and the request to the electronic Working Group, Argentina, Belize, Chile, Kenya,

Morocco, Peru, Syria, Uruguay, and Zimbabwe provided lists of their most needed MRLs. Additional comments were provided by Belgium, Brazil, Chile and IFAH.

4. Each veterinary drug received in response to the Chair's letter or from comment in the electronic working group was included in the database of veterinary drugs of potential interest to developing countries (Appendix B). The complete list of veterinary drugs received in response to the survey is also included in Appendix C.

5. Using the updated Database of Veterinary Drugs of Potential Interest to Developing Countries, the electronic Working Group identified the three most requested veterinary drugs. Bacitracin, florfenicol and enrofloxacin were identified as needed by a greater number of countries than the remaining veterinary drugs. The information collected regarding these three veterinary drugs is summarized in Appendix A.

6. The electronic Working Group requested sponsors for the veterinary drugs included in the Database, highlighting the interest from several member countries in MRLs for bacitracin, florfenicol and enrofloxacin. No sponsors were identified.

### ***Discussion***

7. Additional information is needed on many of the veterinary drugs included in the Database of Veterinary Drugs of Potential Interest to Developing Countries. Many of the veterinary drugs requested do not include what species or tissues are needed. Registration information is also helpful as the veterinary drug must be registered in at least one member country to be eligible for JECFA evaluation.

8. Many of the veterinary drugs included in the Database of Veterinary Drugs of Potential Interest to Developing Countries have been evaluated by JECFA in the past. For some of these veterinary drugs, JECFA has also established an ADI and, in a few cases, recommended MRLs. Where appropriate, the year of JECFA evaluation and ADI status have been included in the Database to show existing data gaps. Most of the veterinary drugs that have already been evaluated by JECFA have Codex MRLs established in other species or tissues than what has been requested in the Database. In these cases, residue data in the requested species or tissue is needed for reevaluation by JECFA. Alternatively, the possibility of extrapolation of MRLs from species to species should be explored (currently under discussion in the electronic Working Group on Extrapolation of MRLs for Veterinary Drugs to Additional Species and Tissues).

9. Traditionally, drug companies have been the source of data provided to JECFA for evaluation. If a drug company is unable to provide sufficient data, a national authority may be able to serve as the data source in addition to or in place of the drug company.

10. An example of this took place at the 19<sup>th</sup> Session of the CCRVDF. The Committee added amoxicillin to the Priority List for Evaluation or Reevaluation by JECFA under the sponsorship of the United States of America. In addition to sponsoring the inclusion of amoxicillin on the priority list, the United States of America provided the dossier to JECFA for evaluation. The drug company, Pfizer Animal Health, granted the U.S. Food and Drug Administration permission to share data with JECFA that they had provided in support of the national approval for amoxicillin. Based on the dossier provided, the JECFA was able to recommend MRLs in cattle, sheep, and pigs.

11. Accordingly, where information on existing national authority MRLs was readily available, member country names were added to the Database of Veterinary Drugs of Potential Interest to Developing Countries as potential sources of data.

12. One member of the electronic working group noted that while the animal drug industry is willing to work with regulatory authorities to provide the necessary information for JECFA evaluation, submitting a dossier through a regulatory authority to JECFA may carry significant business risks for older veterinary drugs that have been marketed safely for a long time. An independent scientific advisory body like the JECFA uses its own criteria for assessment and may or may not agree with the submitting regulatory authority's assessment.

***Recommendations***

13. The electronic Working Group recommends that the Committee continue developing and maintaining the Database of Veterinary Drugs of Potential Interest to Developing Countries. The electronic Working Group also recommends that the Committee request additional information from member countries for those veterinary drugs included in the database where specific information on veterinary drug, species, and tissues is lacking.

14. The electronic Working Group recommends that the Committee establish a Working Group to facilitate identification of sponsors and data for veterinary drugs for ADI/MRL evaluation by JECFA from the Database on Veterinary Drugs of Potential Interest to Developing Countries, with encouragement for broad Observer and Member Country participation.

**Appendix A: Most Commonly Requested Veterinary Drugs**

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs
Bacitracin	Armenia, Chile, Costa Rica, Democratic People's Republic of Korea, Peru	All animals Cattle Chicken Pig Poultry Rabbit Turkey	All Tissues Muscle Liver Fat Fat/Skin Kidney Eggs	Registered in Chile; Costa Rica Dosing Regimen: 275. ppm, 55 ppm, 220 ppm, oral; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia: rabbit and cattle, Australia: chicken; Canada: chicken, turkey, and pig; EU: cattle and rabbit; USA: cattle, swine, chicken, turkey, quail, pheasant, and quail
Florfenicol	Belize, Egypt, Peru, Philippines, Syria	Aquaculture Cattle Chicken Fish Goat Pig Poultry Sheep	Muscle Liver Kidney Fat/Skin Eggs	Registered in Belize; Egypt Cattle Dosage Regimen: 10 mg/kg bw/day orally; Registered in Peru; Philippines: Broad Spectrum Antibiotic (Control of Swine Respiratory Diseases), swine dosage regimen is Oral 5mg/kg bw, product label available; Registered by the Codex National Syrian Committee	Dossier Avi -Mex SA de CV	Flor-Blend Aqua from Avi-Mex, Mexico, Schering, Intervet Schering Plough Animal Health Mexico, Floridin		No Codex MRLs	Australia: cattle, fish, and pig; Canada: salmonids, cattle, and pig; EU: cattle, sheep, goat, pig, poultry, fin fish, and all other food producing species; Syria: temporary in poultry; USA: catfish, salmonids, pig, and cattle.
Enrofloxacin	Armenia, Belize, Peru, Syria	Aquaculture Cattle Chicken Fish Goat Pig Poultry Rabbit Sheep	Muscle Fat Liver Kidney Milk	Registered in Belize; Registered in Peru; Registered by the Codex National Syrian Committee		Various (Bayer, Laboratorios California, Colombia) Anupco UK; Enrosol	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia: cattle, chicken, goat, pig, poultry, rabbit, and sheep; Canada: cattle; EU: cattle, sheep, goat, pig, rabbit, poultry, and all other food producing species; Syria: temporary in poultry; USA: cattle and pig

**Appendix B: Database of Veterinary Drugs of Potential Interest to Developing Countries**

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
All Approved drugs for large animals	Egypt, Kenya	Camel	Meat /fat Liver Kidney Milk		No data are available for any tissue or milk					Camel meat and milk are widely used in Egypt and other countries especially rural areas and in Arab countries. Camel meat and milk are widely consumed in Kenya in the arid and semi arid areas. Camel milk has inherent nutritional and medicinal benefits and has gained popularity among consumers in urban areas and in the city. Demand for camel milk in the international market has increased especially in South Africa and European Union.
Aminosydine	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information
Aminosydine	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Aminosydine	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information
Aminosydine	Armenia	Rabbit			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information
Amoxicillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Pfizer, Inc.		No Codex MRLs	Armenia; Australia; EU; USA	
Amoxicillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Pfizer, Inc.		No Codex MRLs	Armenia; Australia; EU	
Amoxicillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50	Pfizer, Inc.		No Codex MRLs	Armenia; Canada; EU	
Ampicillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth		No Codex MRLs	Armenia; Australia: milk; Canada; EU; USA	
Ampicillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth		No Codex MRLs	Armenia; EU	
Ampicillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50	Wyeth		No Codex MRLs	Armenia; Canada; EU; USA	
Apramycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (1000), Fat (1000), Liver (10,000), Kidney (20,000)	Elanco		No Codex MRLs	Armenia; Australia; EU	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Bacitracin	Democratic People's Republic of Korea	All animals		Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Australia: chicken; Canada: chicken, turkey, and pig; EU: cattle and rabbit; USA: cattle, swine, chicken, turkey, quail, pheasant, and quail	Need to better define species and tissues
Bacitracin	Armenia, Democratic People's Republic of Korea, Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru	MRLs (ppb) in Armenia: Milk (100), Muscle (150), Fat (150), Liver (150), Kidney (150)	Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia; EU; USA	
Bacitracin	Costa Rica, Democratic People's Republic of Korea, Peru	Chicken	All tissues	Costa Rica Dosing Regimen: 275. ppm, 55 ppm, 220 ppm, oral; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Australia, Canada; USA	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Bacitracin	Chile, Costa Rica, Democratic People's Republic of Korea, Peru	Pig	Muscle, Fat, Liver, Kidney	Registered in Chile; Costa Rica Dosing Regimen: 275. ppm, 55 ppm, 220 ppm, oral; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Canada; USA	
Bacitracin	Chile, Democratic People's Republic of Korea	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Registered in Chile; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Australia: chicken; Canada: chicken and turkey; USA	
Bacitracin	Armenia, Democratic People's Republic of Korea	Rabbit		Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days	MRLs (ppb) in Armenia: Muscle (150), Fat (150), Liver (150), Kidney (150)	Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia; EU	Need more specific tissue information
Bacitracin	Chile, Democratic People's Republic of Korea	Turkey	Muscle, Fat, Liver, Kidney	Registered in Chile; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days		Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Canada	



Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Benzyl Penicillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth, G. C. Hanford, Walco International, Teva, Cross Vetpharm	36th JECFA, 1990; Full ADI; MRLs recommended in all species (muscle, liver, kidney, milk)	No Codex MRLs	Armenia; Australia; Canada; EU; USA: zero tolerance	
Boldenone Undecylenate	Guatemala	None specified				Wyeth		No Codex MRLs		Need to better define species and tissues
Carbadox	Guatemala	None specified				Phibro	36th JECFA, 1990; 60th JECFA, 2003; No ADI	No Codex MRLs	USA: swine	Need to better define species and tissues
Cefoperazone	Costa Rica	Cattle	Milk	25 mg/mL, intramammary		Pfizer (Italy)		No Codex MRLs	EU: cattle	
Cefotaxim	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	5 mg/kg bw/day orally		Pfizer		No Codex MRLs		
Cephacetrile	Armenia	Cattle	Muscle, Liver, Kidney, Milk	Intramammary Use only		Un-known		No Codex MRLs		
Cephalexine	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 200, Liver 200, Kidney 200, Milk 1000	Un-known		No Codex MRLs	Armenia	
Cephalonium	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 20	Un-known		No Codex MRLs	Armenia: milk	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Cephazoline	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Un-known		No Codex MRLs	Armenia: milk	
Cephazoline	Armenia	Goat	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Un-known		No Codex MRLs	Armenia: milk	
Cephazoline	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Un-known		No Codex MRLs	Armenia: milk	
Chlorhexidine	Democratic People's Republic of Korea	Rabbit		Oral, 0.1% solution for 5 days		Wyeth, First Priority		No Codex MRLs	EU: all food producing species - not required	Need more specific tissue information
Cloxacillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Pfizer		No Codex MRLs	Armenia; Australia: milk; Canada; EU; USA	
Cloxacillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300	Pfizer		No Codex MRLs	Armenia; EU	
Cloxacillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Pfizer		No Codex MRLs	Armenia; EU	
Colistin	Armenia	All livestock			MRLs (ppb) in Armenia: Fat (150), Muscle (150), Liver (150, Kidney (200), Milk (50), Egg (300)	Un-known	66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, goat, rabbit, chicken, and turkey	Armenia; EU: all food producing species	Need to better define species and tissues
Coumaphos	Costa Rica	Cattle	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs	Australia	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Coumaphos	Costa Rica	Goat	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs		
Coumaphos	Costa Rica	Pig	Tissues	20% topically		Bayer de Mejico		No Codex MRLs		Need more specific tissue information
Coumaphos	Costa Rica	Sheep	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs		
Cypermethrin	Guatemala	None specified				Un-known	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle and sheep	Australia: cattle, deer, goat, horse, pig, poultry, and sheep; EU: all ruminants and salmonids	Need to better define species and tissues
Dexamethasone	Iran	Goat	muscle	1 - 2.5 mL (2mg) IM, IV, SC		Interchemistry (Netherlands), Schering Plough, Teva, Cross Vetpharm	70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, and horse	EU	
Dexamethasone	Iran	Sheep	muscle	1 - 2.5 mL (2mg) IM, IV, SC		Interchemistry (Netherlands), Schering Plough, Teva, Cross Vetpharm	70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, and horse	Australia: cattle; EU: cattle and goat	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Diazinon	Guatemala	None specified				Un-known		No Codex MRLs	Australia: mammals and poultry; EU: cattle, sheep, goat, and pig	Need to better define species and tissues
Diclazuril	Guatemala	None specified				Schering Plough	50th JECFA, 1998; Full ADI	Codex MRLs in sheep, rabbit, and poultry	Canada: chicken and turkey; EU: all ruminants and pig; USA: chicken and turkey	Need to better define species and tissues
Dicloxacillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Wyeth		No Codex MRLs	Armenia; EU	
Dicloxacillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300	Wyeth		No Codex MRLs	Armenia; EU	
Dicloxacillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Wyeth		No Codex MRLs	Armenia; EU	
Dimetridazole	Guatemala	None specified				Un-known	34th JECFA, 1989; No ADI	No Codex MRLs		Need to better define species and tissues
Doxycycline	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (100), Liver (300)	Un-known		No Codex MRLs	Armenia; EU	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Doxycycline	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (200), Liver (300), Kidney (600)	Un-known		No Codex MRLs	Armenia; EU	Need more specific tissue information
Doxycycline	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (200), Liver (300), Kidney (600)	Un-known		No Codex MRLs	Armenia; EU	Need more specific tissue information
Emamectin Benzoate	Chile	Finfish	Muscle and Skin	Registered in Chile					Canada: salmonids; EU	
Emamectina	Peru	Fish	Muscle			Schering		No Codex MRLs	Canada: salmonids; EU; finfish	
Enrofloxacin	Belize	Aquaculture	Muscle	Registered in Belize		Various (Bayer, Laboratorios California, Colombia) Anupco UK	48th JECFA, 1997; Full ADI	No Codex MRLs	EU	
Enrofloxacin	Armenia, Peru	Cattle	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; Canada; EU; USA	
Enrofloxacin	Armenia, Peru	Chicken	Muscle, Fat/Skin, Liver, Kidney	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat with Skin 100, Liver 200, Kidney 300	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	
Enrofloxacin	Peru	Fish	Muscle	Registered in Peru		Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	EU	
Enrofloxacin	Armenia, Peru	Goat	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Enrofloxacin	Armenia, Peru	Pig	Muscle, Fat, Liver, Kidney	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 200, Kidney 300	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU; USA	
Enrofloxacin	Belize, Syria	Poultry	Muscle, liver, kidney, fat	Registered in Belize; Registered by the Codex National Syrian Committee	Temporary MRLs in Syria: Liver (200), Kidney (300), Muscle (100) (Studies under development)	Enrosol; Various (Bayer, Laboratorios California, Colombia) Anupco UK	48th JECFA, 1997; Full ADI	No Codex MRLs	EU; Syria	
Enrofloxacin	Armenia	Rabbit	Muscle, Fat, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 200, Kidney 300	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	
Enrofloxacin	Armenia, Peru	Sheep	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	
Erythromycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40) (Studies under development)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU; USA: cattle tissues	Need more specific tissue information
Erythromycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; EU	Need more specific tissue information
Erythromycin	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU; USA	Need more specific tissue information
Erythromycin	Armenia	Sheep			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Flavophospholipol	Costa Rica	Cattle	All tissues	100 ppm oral		Intervet International GmbH		No Codex MRLs	Australia	Need more specific tissue information
Flavophospholipol	Costa Rica	Chicken	All tissues	100 ppm oral		Intervet International GmbH		No Codex MRLs		Need more specific tissue information
Flavophospholipol	Costa Rica	Pig	All tissues	100 ppm oral		Intervet International GmbH		No Codex MRLs		Need more specific tissue information
Flavophospholipol	Chile	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Registered in Chile		Intervet International GmbH		No Codex MRLs		
Florfenicol	Belize	Aquaculture	Muscle	Registered in Belize	Dossier Avi –Mex SA de CV	Flor-Blend Aqua from Avi-Mex, Mexico		No Codex MRLs	Australia: fish; Canada: salmonids; EU: finfish; USA: catfish and salmonids	
Florfenicol	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Schering		No Codex MRLs	Australia; Canada; EU; USA	
Florfenicol	Egypt, Peru	Chicken	Meat, fat/skin, Liver, Kidney, Eggs	Egypt Dosage Regimen: 10 mg/kg bw/day orally; Registered in Peru		Schering		No Codex MRLs	EU	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Florfenicol	Peru	Fish	Muscle	Registered in Peru		Schering		No Codex MRLs	Australia; Canada: salmonids; EU: finfish; USA: catfish and salmonids	
Florfenicol	Peru	Goat	Muscle, Liver, Fat/Skin Kidney	Registered in Peru		Schering		No Codex MRLs	EU	
Florfenicol	Peru, Philippines	Pig	Muscle, Fat/Skin, Liver, Kidney	Registered in Peru; Philippines: Broad Spectrum Antibiotic (Control of Swine Respiratory Diseases), dosage regimen is Oral 5mg/kg bw, product label available	The European Agency for the Evaluation of Medicinal Products- Veterinary Medicines and Inspections: Muscle (300µg/kg), Skin+Fat (500µg/kg), Liver (2000µg/kg) and Kidney (500µg/kg) Australian Pesticide and Veterinary Medicine Authority- Muscle (0.5mg/kg), Skin+Fat (1mg/kg), Liver (3mg/kg) and Kidney (1mg/kg)	Intervet Schering Plough Animal Health Mexico		No Codex MRLs	Australia; Canada; EU	
Florfenicol	Syria	Poultry	Liver Kidney Muscle	Registered by the Codex National Syrian Committee	Temporary MRLs in Syria: Liver (2500), Kidney (750), Muscle (100) (Studies under development)	Floridin		No Codex MRLs	EU; Syria	
Florfenicol	Peru	Sheep	Muscle, Liver, Fat/Skin Kidney	Registered in Peru		Schering		No Codex MRLs	EU	



Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Flumequine	Armenia	Cattle	Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Un-known	66th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	
Flumequine	Armenia	Chicken	Fat with Skin		MRLs (ppb) in Armenia: Muscle 400, Fat and Skin 250, Liver 800, Kidney 1000	Un-known	66th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	
Flumequine	Chile	Finfish	Muscle and Skin	Registered in Chile			66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and trout	EU	
Flumequine	Armenia	Goat	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Un-known	66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and trout	Armenia; EU	
Flumequine	Armenia	Sheep	Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Un-known	66th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	
Flumetrina (Flumethrin)	Guatemala	Bees	Honey					No Codex MRLs	EU: not required	
Flunixin meglumine	Costa Rica	Cattle	Tissues and Milk	83 mg/mL parenteral		Schering Plough, Calox Venezuela		No Codex MRLs	Australia; Canada; EU; USA	
Flunixin meglumine	Costa Rica	Pig	Tissues and Milk	83 mg/mL parenteral		Schering Plough, Calox Venezuela		No Codex MRLs	Canada; EU; USA	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Formic Acid	Guatemala	Bees	Honey			Un-known		No Codex MRLs	EU: all food producing species - not required	
Fosfomicina	Costa Rica	Chicken	All tissues	300 - 500 ppm, oral		Bedson de Centroamerica		No Codex MRLs		Need more specific tissue information
Fosfomicina	Chile	Poultry	Fat, Muscle, Liver, Kidney, Eggs	Registered in Chile		Bedson, Argentina		No Codex MRLs		
Fumagillin	Guatemala	Bees	Honey			Un-known		No Codex MRLs		
Gentamicin	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	5mg/kg bw/day orally		Bayer ADWIA	50th JECFA, 1998; Full ADI	Codex MRLs in cattle and pig	Canada; USA	
Hydrocortisone	Democratic People's Republic of Korea	Pig		Oral, 0.1 - 0.3g three times a day		Un-known		No Codex MRLs	EU: all food producing species - not required	Need more specific tissue information
Ivermectin	19th CCRVDF	Camel	all tissues				58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	EU	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Ivermectin	Uruguay, 19th CCRVDF	Cattle	Muscle	Uruguay: Endectocide, Dosage regimen is parenteral 0.2 mg/kg bw, Widely used in the country in food producing animals. Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5% Ivermectin, product label available	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs liver, fat, and milk	Australia; Canada; EU; USA	
Ivermectin	Uruguay	Horse	Muscle	Uruguay: Endectocide, Dosage regimen is parenteral 0.2 mg/kg bw, Widely used in the country in food producing animals. Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5% Ivermectin, product label available	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	Australia; EU	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Ivermectin	Guatemala	None specified				Merial	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	Australia: cattle, deer, horse, pig, and sheep; Canada: cattle, sheep, and pig; EU: all mammalian food producing species; USA: cattle, swine, sheep, reindeer, and American bison	Need to better define species and tissues
Ivermectin	19th CCRVDF	Rabbit	all tissues				58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	EU	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Ivermectin	Uruguay	Sheep	Muscle	Uruguay: Endectocide, Dosage regimen is parenteral 0.2 mg/kg bw, Widely used in the country in food producing animals. Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5% Ivermectin, product label available	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs in liver and fat	Australia; Canada; EU: fat, liver, and kidney; USA: liver	
Kanamycin	Armenia	All livestock except fish			MRLs in Armenia: Muscle (100), Fat (100), Liver (600), Kidney (2500), Milk (150)	Wyeth	12th JECFA, 1968; No ADI	No Codex MRLs	Armenia; EU: all food producing species except fin fish	Need to better define species and tissues
Kitasamycin	Costa Rica	Chicken	All tissues	110 - 330 ppm oral		Anupco, Inglaterra		No Codex MRLs	Australia	Need more specific tissue information
Kitasamycin	Costa Rica	Pig	All tissues	110 - 330 ppm oral		Anupco, Inglaterra		No Codex MRLs	Australia	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Levamisole	Morocco	Goat	Fat, Muscle, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCICEVAI NTERVET CALIERPH ARMA 5ECOMED	42nd JECFA, 1994; Full ADI	Codex MRLs in cattle, sheep, and poultry.	Australia; Canada: cattle and sheep; EU: cattle and sheep; USA: cattle and sheep	
Lincomycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRL in milk	Armenia; Australia; EU	Need more specific tissue information
Lincomycin	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Egg (50)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in liver, kidney, muscle, fat, and fat with skin	Armenia; Australia; Canada; EU; USA	Need more specific tissue information
Lincomycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	No Codex MRLs	Armenia; Australia; EU	Need more specific tissue information
Lincomycin	Armenia	Sheep			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	No Codex MRLs	Armenia; EU	Need more specific tissue information
Marbofloxacin	Armenia	Cattle			MRLs in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Un-known		No Codex MRLs	Armenia; EU	Need more specific tissue information
Marbofloxacin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Marbofloxacin	Armenia	Sheep			MRLs in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Un-known		No Codex MRLs	Armenia	Need more specific tissue information
Mebendazole	Costa Rica	Cattle	All tissues	500 - 600 ppm, oral		Schering Plough, Cenavisa, Espana		No Codex MRLs	Australia	Need more specific tissue information
Mebendazole	Costa Rica	Chicken	All tissues	500 - 600 ppm, oral		Schering Plough, Cenavisa, Espana		No Codex MRLs		Need more specific tissue information
Mebendazole	Costa Rica	Pig	All tissues	500 - 600 ppm, oral		Schering Plough, Cenavisa, Espana		No Codex MRLs	Australia	Need more specific tissue information
Metronidazole	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	2mg/kg bw/day orally, Used together with colistin		Marcyrl	34th JECFA, 1989; No ADI	No Codex MRLs		
Monensin	Guatemala	None specified				Elanco	70th JECFA, 2008; Full ADI	Codex MRLs in quail, cattle, sheep, goat, chicken, and turkey	Australia: cattle, goat, poultry, and sheep; Canada: cattle, chicken and turkey; EU: cattle; USA: cattle, goat, chicken, turkey,	Need to better define species and tissues

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
									and quail	
Nafcillin	Armenia	All ruminant animals	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Un-known		No Codex MRLs	Armenia; EU: all ruminants	Need to better define species
Nandrolone	Guatemala	None specified				Un-known		No Codex MRLs		Need to better define species and tissues
Nitroimidazoles	Guatemala	None specified				Un-known		No Codex MRLs		Need to better define species and tissues
Norfloxacin	Belize	Aquaculture	Muscle	Registered in Belize		Various (Bayer, Laboratorios California, Colombia) Anupco UK		No Codex MRLs		
Norfloxacin	Belize	Poultry	Muscle, liver, kidney, fat	Registered in Belize		Various (Bayer, Laboratorios California, Colombia) Anupco UK		No Codex MRLs		
Novobiocin	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (50)	Pfizer	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia: milk; Australia; Canada;	Need more specific tissue information



Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
									EU; USA	
Olaquinox	Guatemala	None specified				Un-known	42nd JECFA, 1994; No ADI	No Codex MRLs	Australia: pig and poultry	Need to better define species and tissues
Olaquinox	Belize	Poultry	Muscle, Kidney	Registered in Belize		Helm Mexico and Calier Spain	42nd JECFA, 1994; No ADI	No Codex MRLs	Australia	
Oxacillin	Armenia	All ruminant animals	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Un-known		No Codex MRLs	Armenia; EU: all food producing species	Need to better define species
Oxalic Acid	Guatemala	Bees	Honey			Un-known		No Codex MRLs	EU: not required	
Oxolinic Acid	Chile	Finfish	Muscle and Skin	Registered in Chile			43rd JECFA, 1994; No ADI	No Codex MRLs	EU	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Oxytetracycline	Armenia	All livestock			MRLs (ppb) in Armenia: Muscle (300), Liver (300), Kidney (100), Milk (100)	Pfizer, Boehringer Ingeleheim, Phibro, Pennfield	50th JECFA, 1998; 58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Armenia; Australia: fish, bees, cattle, goat, pig, sheep, mammals, poultry, shrimp, and prawns; Canada: cattle, pig, sheep, salmonids, lobster, chicken, turkey, and bees; EU: all food producing species; USA: beef cattle, dairy cattle, calves, swine, sheep, chicken, turkey, finfish, and lobster	Need to better define species and tissues

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Oxytetracycline	Argentina	Bees	Honey	Registered in Argentina in cattle, sheep, goats, pigs, bees, fur bearing animals, and aquaculture		Un-known	50th JECFA, 1998; 58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Australia; Canada	
Oxytocin	Costa Rica	Cattle	Tissues and milk	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Apropharma		No Codex MRLs	EU: not required	
Oxytocin	Costa Rica	Pig	Tissues	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Apropharma		No Codex MRLs	EU: not required	Need more specific tissue information

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Oxytocin	Costa Rica	Sheep	Tissues and milk	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Aproparma		No Codex MRLs	EU: not required	
Phenoxymethylpenicillin	Armenia	Cattle	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Un-known		No Codex MRLs	Armenia	
Phenoxymethylpenicillin	Armenia	Pig	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Un-known		No Codex MRLs	Armenia; EU	
Phenoxymethylpenicillin	Armenia	Poultry	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Un-known		No Codex MRLs	Armenia; EU	
Phenoxymethylpenicillin	Armenia	Sheep	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Un-known		No Codex MRLs	Armenia	
Phosphomycin	Argentina	Aquaculture	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Phosphomycin	Argentina	Cattle	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		
Phosphomycin	Argentina	Pig	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		
Phosphomycin	Argentina	Poultry	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		
Piperazine	Democratic People's Republic of Korea	Pig		Oral, 0.4 g/kg BW/day		Fleming Labs		No Codex MRLs	EU; USA	Need more specific tissue information
Pirlimycin	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (50), Liver (500), Kidney (1500), Egg (50)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle	Armenia	Need more specific tissue information
Pirlimycin	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (50), Liver (500), Kidney (1500)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle	Armenia	Need more specific tissue information
Ractopamine	Guatemala	None specified				Elanco	Most recent evaluation by JECFA in 2010; Full ADI; MRLs recommended in cattle and pig	No Codex MRLs	Australia: pig; Canada: pig, cattle, and turkey; USA:	Need to better define species and tissues

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
									cattle, swine, and turkey	
Rafoxanide	Morocco	Cattle	Muscle, Fat, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCI CEVA INTERVET NOVOVET ECOMED		No Codex MRLs	EU	
Rafoxanide	Morocco	Sheep	Muscle, Fat, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCI CEVA INTERVET NOVOVET ECOMED		No Codex MRLs	EU	
Rifamycine	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	10 mg/kg bw/day orally		EI- NASR		No Codex MRLs		
Rifaximine	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (60)	Un-known		No Codex MRLs	Armenia: milk; EU: not required	Need more specific tissue information
Robenidine	Costa Rica	Chicken	Tissues	500 ppm, oral		Alpharma, Inc., Farivet		No Codex MRLs	Australia; Canada	Need more specific tissue information
Roxarsone	Peru	Chicken	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Canada; USA	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Roxarsone	Belize	Poultry	Muscle, Kidney	Registered in Belize		Helm Mexico and Calier Spain		No Codex MRLs	Canada: chicken and turkey; USA: chicken and turkey	
Salicylic acid	Democratic People's Republic of Korea	All		Tetter, Applied, Ointment (5-10%)		Democratic People's Republic of Korea		No Codex MRLs	EU: not required	Need to better define species and tissues
Streptomycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (500), Fat (500), Liver (500), Kidney (1000), Milk (200)	Un-known	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, and chicken	Armenia; Australia; Canada: cattle; EU; USA: calves	Need more specific tissue information
Sulfadimethoxine	Democratic People's Republic of Korea	All		Bacterial infection; Oral, 0.05-0.1g/kg·bw/day, or injection, 15-30% solution (subcutaneous, intravenous)		Alpharma		No Codex MRLs	Canada: cattle, swine, horse, chicken, and turkey; EU: all food producing species; USA: chicken, turkey, cattle, duck, salmonids, catfish, and chukar partridges	Need to better define species and tissues

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Sulfamerazine	Democratic People's Republic of Korea	All		Bacterial infection, coccidiosis; Oral, 0.05-0.1g/kg•bw/day, or injection, 15-30% solution (subcutaneous, intravenous)		Alpharma		No Codex MRLs	Canada: cattle, sheep, and pig; EU: all food producing species	Need to better define species and tissues
Sulfamethoxy pyridazin	Democratic People's Republic of Korea	All		Bacterial infection; Oral, 0.02-0.2 g/kg•bw/day		Un-known		No Codex MRLs	EU: all food producing species; USA: swine and cattle	Need to better define species and tissues
Sulfaquinoxaline	Democratic People's Republic of Korea	Poultry		Bacterial infection, coccidiosis; Oral, 0.02-0.03% of the feed for prevention, 0.05-0.07% for therapy for 3 days		Teva		No Codex MRLs	Australia; Canada: chicken and turkey; EU; USA: chicken and turkey	Need more specific tissue information
Sulfaquinoxaline	Democratic People's Republic of Korea	Rabbit		Coccidiosis; Oral, 0.01-0.02% of the feed for prevention for 10 days, 0.05-0.07% for therapy for 3-5 days		Teva		No Codex MRLs	Canada; EU	Need more specific tissue information



Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Sulfonamides	Guatemala	None specified				Un-known		Codex MRLs in cattle milk and tissues of unspecified species	EU: all food producing species	Need to better define species and tissues
Tetracycline	Guatemala	Bees	Honey			Pfizer, Boehringer Igelheim, Wyeth, Alpharma, Medpharmex, Agri Laboratories, Teva	50th JECFA, 1998; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn		
Tetracycline	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (100), Liver (300), Kidney (600), Milk (100)	Pfizer, Boehringer Igelheim, Wyeth, Alpharma, Medpharmex, Agri Laboratories, Teva	50th JECFA, 1998; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Armenia; Canada: cattle and sheep; EU; USA: calves	Need more specific tissue information
Thymol	Guatemala	Bees	Honey			Un-known		No Codex MRLs		
Tilmicosin	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (40)	Elanco	70th JECFA, 2008; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia: milk; Australia; Canada; EU; USA	Need MRL for milk

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
Tilmicosin	19th CCRVDF	Chicken	Eggs				70th JECFA, 2008; Full ADI	No Codex MRLs		
Tilmicosin	19th CCRVDF	Turkey	Eggs				70th JECFA, 2008; Full ADI	No Codex MRLs		
Tolfinamic Acid (tolfin )	Egypt	Cattle	Meat /fat Liver Kidney Milk	2 mg/kg bw/day i.m/i.v		Vetiquenol		No Codex MRLs	EU	
Triamcinolone	Argentina	Cattle	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Un-known		No Codex MRLs		
Triamcinolone	Argentina	Goat	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Un-known		No Codex MRLs		
Triamcinolone	Argentina	Pig	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Un-known		No Codex MRLs		
Triamcinolone	Argentina	Sheep	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Un-known		No Codex MRLs		
Triclabendazole	Kenya, Iran	Goat	Liver, Kidney, Milk, Muscle	Iran dosage regimen: 5 mg/kg oral		Novartis	70th JECFA, 2008; Full ADI	Codex MRLs in cattle and sheep	Australia; EU	
Trimethoprim	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Chicken	Muscle, Liver,	Registered in Peru		Roche		No Codex MRLs	Australia; EU	

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
			Fat/Skin, Kidney							
Trimethoprim	Morocco	Every producing food species	Fat, Muscle, Liver, Kidney, Milk	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire VIRBACC EVA SOPHAVE T INTERVET NOVOVET BIMEDAU PHARFRA NVET		No Codex MRLs	Australia: mammals and poultry; Canada: salmonids; EU: horse and all other food producing species	Need more specific species information
Trimethoprim	Peru	Goat	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Pig	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Sheep	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Virginiamycin	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA: not required	
Virginiamycin	Peru	Chicken	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA: broiler chickens - not required	
Virginiamycin	Guatemala	None specified				Phibro, Alpha		No Codex MRLs	Australia: cattle, pig, poultry, and sheep;	Need to better define species and tissues

Name	Requesting Countries	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	Comments
									USA: swine	
Virginiamycin	Peru	Pig	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA	

**Appendix C: Response to Survey of Most Needed MRLs**

<b>Veterinary Drug Name</b>	<b>Species</b>	<b>Tissues</b>	<b>Manufacturer</b>	<b>Existing Data &amp; Source</b>	<b>Additional Comments</b>	<b>Nominating Country</b>	<b>Country Priority</b>
All Approved drugs for large animals	Camels	Meat /fat Liver Kidney Milk		No data are available for any tissue or milk	Camel meat and milk are widely consumed in Kenya in the arid and semi arid areas. Camel milk has inherent nutritional and medicinal benefits and has gained popularity among consumers in urban areas and in the city. Demand for camel milk in the international market has increased especially in South Africa and European Union.	Kenya	1
Bacitracin	Poultry Turkey Pigs	Muscle, Fat, Liver, Kidney, Eggs	Alpharma Inc., USA	No Codex or EU MRLs	Registered in Chile	Chile	1
Enrofloxacin	Chicken, cattle, pig, sheep, goat, fish	Muscle, Liver, Fat/Skin, Kidney	Bayer		Registered in Peru	Peru	1
Enrofloxacin	Poultry Aquaculture	Poultry Muscle, liver, kidney, fat and Aquaculture Muscle	Various (Bayer, Laboratorios California, Colombia) Anupco UK		Registered by Belize	Belize	1
Imizol (Imidocarb Diproprionate)	Bovine (Cattle)	Muscle	Coopers		Very widely used by farmers in Zimbabwe. Registered by Zimbabwe. [Codex MRLs Established]	Zimbabwe	1
Ivermectin	Cattle Sheep Horses	Muscle	Merial	Codex MRLs in Cattle liver and Sheep liver. NO MRLs in muscle.	Registered by Uruguay. Widely used in the country in food producing animals; 80 registered 1% Ivermectin 1 registered 2% Ivermectin 18 registered 3.15% Ivermectin 3 registered 3.5% Ivermectin	Uruguay	1
Norfloxacin	Poultry Aquaculture	Poultry Muscle, liver, kidney, fat and Aquaculture Muscle	Various (Bayer, Laboratorios California, Colombia) Anupco UK		Registered by Belize	Belize	1
Oxytetracycline	Poultry	Liver Kidney Muscles	Oxydina	Temporary MRLs in Syria: Liver-300, Kidney-600, Muscles-100	Temporary values (Studies under development). Registered by the Codex National Syrian Committee. [Codex MRLs Established]	Syria	1

Veterinary Drug Name	Species	Tissues	Manufacturer	Existing Data & Source	Additional Comments	Nominating Country	Country Priority
Triamcinolone	Cattle, Sheep, Goats, Pigs	Muscle	Unknown	No Codex MRLs	Route of administration IM 7mg/300kg. Registered by Argentina.	Argentina	1
Trimethoprim	Every producing food species	Fat, Muscle, Liver, Kidney, Milk	ATLAS Vétérinaire VIRBAC CEVA SOPHAVET INTERVET NOVOVET BIMEDA UPHAR FRANVET	EU regulation 37/2010	Registered by Morocco	Morocco	1
Enrofloxacin	Poultry	Liver Kidney Muscles	Enrosol	Temporary MRLs in Syria: Liver-200, Kidney-300, Muscles-100	Temporary values (Studies under development). Registered by the Codex National Syrian Committee	Syria	2
Florfenicol	Aquaculture	Muscle	Flor-Blend Aqua from Avi-Mex, Mexico	Dossier Avi – Mex SA de CV	Registered by Belize	Belize	2
Florfenicol	Chicken, pig, cattle, sheep, goat, fish	Muscle, Liver, Fat/Skin, Kidney	Schering		Registered by Peru	Peru	2
Flumequine	Finfish	Muscle and skin		No Codex MRLs	Registered by Chile	Chile	2
Levamisole	Bovine, ovine, caprine, poultry	Fat, Muscle, Liver, Kidney	ATLAS Vétérinaire BCICEVAINTERVETCALIERPHARMA SECOMED	EU regulation 37/2010	Codex MRLs established for all except goats. Registered by Morocco.	Morocco	2
Phosphomycin	Poultry Pigs, Cattle Aquaculture	Muscle Skin and fat Liver Kidney Milk Eggs	Bedson S.A.	No Codex MRLs	ADI Japan: 0.019 mg/Kg Pv/day Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv. Registered by Argentina in poultry and pigs, but not cattle and aquaculture.	Argentina	2
Procaine Penicillin	Bovine (Cattle)	Muscle Milk	Caps Holdings (Zimbabwe)		Very widely used by farmers in Zimbabwe. Registered by Zimbabwe [Codex MRLs Established]	Zimbabwe	2
Emamectin	Fish	Muscle	Schering			Peru	3
Flavofosfolipol	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Intervet International GmbH	No Codex or EU MRLs	Registered by Chile	Chile	3
Florfenicol	Poultry	Liver Kidney Muscles	Floridin	Temporary MRLs in Syria: Liver-2500, Kidney-750, Muscles-100	Temporary values (Studies under development). Registered by the Codex National Syrian Committee	Syria	3

Veterinary Drug Name	Species	Tissues	Manufacturer	Existing Data & Source	Additional Comments	Nominating Country	Country Priority
Olaquinox	Poultry	Muscle, Kidney	Helm Mexico and Calier Spain		Registered by Belize	Belize	3
Oxytetracycline	Bees	Honey	Unknown	No Codex MRLs	Prescribed for the treatment of Foulbrood in powder at 6%-7%. Registered by Argentina in cattle, sheep, goats, pigs, bees, fur bearing animals and aquaculture.	Argentina	3
Rafoxanide	Bovine, ovine	Muscle, Fat, Liver, Kidney	ATLAS Vétérinaire BCI CEVA INTERVET NOVOVET ECOMED	EU regulation 37/2010	Registered by Morocco	Morocco	3
Roxarsone	Poultry	Muscle, Kidney	Helm Mexico and Calier Spain		Registered by Belize	Belize	3
Virginiamicin	Chicken, pigs, cattle	Muscle, Liver, Fat/Skin, Kidney			Registered by Peru	Peru	3
Bacitracin	Chicken, pigs, cattle	Muscle, Liver, Fat/Skin, Kidney			Registered in Peru	Peru	4
Fosfomicina	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Bedson, Argentina	No Codex or EU MRLs	Registered by Chile	Chile	4
Emamectin Benzoate	Finfish	Muscle and skin		No Codex MRLs	Registered in Chile	Chile	5
Roxarsone	Chicken,	Muscle, Liver, Fat/Skin, Kidney			Registered by Peru	Peru	5
Oxolinic Acid	Finfish	Muscle and skin		Codex MRLs just for Rainbow trout	Registered by Chile	Chile	6
Trimethoprim	Chicken, cattle, pigs, sheep, goats	Muscle, Liver, Fat/Skin, Kidney	Roche		Registered by Peru	Peru	6