ZOONOSES MONITORING

MALTA

The Report referred to in Article 9 of Directive 2003/99/EC

TRENDS AND SOURCES OF ZOONOSES AND ZOONOTIC AGENTS IN HUMANS, FOODSTUFFS, ANIMALS AND FEEDINGSTUFFS

including information on foodborne outbreaks and antimicrobial resistance in zoonotic agents

IN 2005

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: **Malta**

Reporting Year: **2005**

Institutions and laboratories involved in reporting and monitoring:

Laboratory name	Description	Contribution
Food and Veterinary Regulation Division		
Department of Public Health		

PREFACE

This report is submitted to the European Commission in accordance with Article 9 of Council Directive 2003/99/EC[1]. The information has also been forwarded to the European Food Safety Authority (EFSA).

The report contains information on trends and sources of zoonoses and zoonotic agents in Malta during the year 2005. The information covers the occurrence of these diseases and agents in humans, animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and commensal bacteria as well as information on epidemiological investigations of foodborne outbreaks. Complementary data on susceptible animal populations in the country is also given.

The information given covers both zoonoses that are important for the public health in the whole European Community as well as zoonoses, which are relevant on the basis of the national epidemiological situation.

The report describes the monitoring systems in place and the prevention and control strategies applied in the country. For some zoonoses this monitoring is based on legal requirements laid down by the Community Legislation, while for the other zoonoses national approaches are applied.

The report presents the results of the examinations carried out in the reporting year. A national evaluation of the epidemiological situation, with special reference to trends and sources of zoonotic infections, is given. Whenever possible, the relevance of findings in foodstuffs and animals to zoonoses cases in humans is evaluated.

The information covered by this report is used in the annual Community Summary Report on zoonoses that is published each year by EFSA.

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[1] Directive 2003/99/EC of the European Parliament and of the Council of 12 December 2003 on the monitoring of zoonoses and zoonotic agents, amending Decision 90/424/EEC and repealing Council Directive 92/117/EEC, OJ L 325, 17.11.2003, p. 31

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1. ANIMAL POPULATIONS

The relevance of the findings on zoonoses and zoonotic agents has to be related to the size and nature of the animal population in the country.

A. Information on susceptible animal population

Sources of information:

Information gathered by the Food and Veterinary Regulation Division. Information of Bovine population as on National Bovine Database. Other animal population estimated according to census carried out on farms throughout the year.

Dates the figures relate to and the content of the figures:

The figures represent the average live population throughout the year.

Geographical distribution and size distribution of the herds, flocks and holdings

All holdings are distributed evenly over the whole territory, except for swine reproducers which are isolated on the uninhabited island of Comino.

Table Susceptible animal populations

* Only if different than current reporting year

Animal species	Category of animals	Livestock numbers (live animals)	Year*	Number of slaughtered animals	Year*	Number of herds or flocks	Year*	Number of holdings	Year*
Cattle (bovine animals)	dairy cows and heifers	18498						158	
	meat production animals	2098						255	
Gallus gallus (fowl)	mixed flocks/holdings							25	
	laying hens (1)	633422						60	
	broilers (2)	584585						171	
Goats	in total	6808							
Pigs	in total	66000						175	
Sheep	in total	14236							
Solipeds, domestic	horses - in total	2136						1946	
Sheep and goats	in total							2031	

(1): The population figure also includes layers on mixed holdings.
(2): The population figure also includes broilers on mixed holdings.

2. INFORMATION ON SPECIFIC ZOONOSES AND ZOONOTIC AGENTS

Zoonoses are diseases or infections, which are naturally transmissible directly or indirectly between animals and humans. Foodstuffs serve often as vehicles of zoonotic infections. Zoonotic agents cover viruses, bacteria, fungi, parasites or other biological entities that are likely to cause zoonoses.

2.1. SALMONELLOSIS

2.1.1. General evaluation of the national situation

2.1.2. Salmonella in foodstuffs

2.1.3. Salmonella in animals

2.1.4. Salmonella in feedingstuffs

2.1.5. Salmonella serovars and phagetype distribution

2.1.6. Antimicrobial resistance in Salmonella isolates

The methods of collecting, isolating and testing of the Salmonella isolates are described in the chapters above respectively for each animal species, foodstuffs and humans. The serotype and phagetype distributions can be used to investigate the sources of the Salmonella infections in humans. Findings of same serovars and phagetypes in human cases and in foodstuffs or animals may indicate that the food category or animal species in question serves as a source of human infections. However as information is not available from all potential sources of infections, conclusions have to be drawn with caution.

2.2. CAMPYLOBACTERIOSIS

2.2.1. General evaluation of the national situation

2.2.2. Campylobacter, thermophilic in foodstuffs

2.2.3. Campylobacter, thermophilic in animals

2.2.4. Antimicrobial resistance in Campylobacter, thermophilic isolates

2.3. LISTERIOSIS

2.3.1. General evaluation of the national situation

A. Listeriosis general evaluation

History of the disease and/or infection in the country

The tests carried out in 2004 were part of a study that was carried out to evaluate the incidence of Listeria spp. in traditional cheeselet production in Malta. This was the first time that such a study was undertaken in Malta. It is hoped that this study can be extended to cover more farms over a longer period of production for several years. In 2005, the study was not performed.

2.3.2. Listeria in foodstuffs

2.3.3. Listeria in animals

2.4. E. COLI INFECTIONS

2.4.1. General evaluation of the national situation

2.4.2. Escherichia coli, pathogenic in foodstuffs

2.4.3. Escherichia coli, pathogenic in animals

2.5. TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1. General evaluation of the national situation

2.5.2. Mycobacterium in animals

A. Mycobacterium bovis in Bovine Animals

Status as officially free of bovine tuberculosis during the reporting year

Additional information

Even though there have been no cases of Tuberculosis in bovines for more than ten years, Malta has not yet obtained recognition as officially free from bovine tuberculosis.

Monitoring system

Sampling strategy

Bovines on dairy cattle farms are tested on a yearly basis by means of the intradermal comparative test.

Frequency of the sampling

Once a year

Type of specimen taken

Other: Intradermal test

Methods of sampling (description of sampling techniques)

Two 0.1ml doses, one of protein purified derivative (PPD) of bovine tuberculin and one of PPD of avian tuberculin are injected in the intradermal layer of the skin in the neck region of the bovine.

Case definition

Positive when the Bovine PPD injection site swells up 4 mm or more than the avian PPD injection site; Dubious when the Bovine PPD injection site swells up from 2 mm to 4 mm more than the avian PPD injection site; to be measured by means of skin calipers.

Diagnostic/analytical methods used

n/a

Vaccination policy

n/a

Measures in case of the positive findings or single cases

Positive cases: slaughtered; the herd is retested two months later.
Dubious cases: isolation; the animal is retested two months later.

Table Bovine tuberculosis in countries and regions that do not receive Community co-financing for eradication programme

Region	Total number of existing bovine		Officially free herds		Infected herds		Routine tuberculin testing		Number of tuberculin tests carried out before the introduction into the herds (Annex A(I)(2)(c) third indent (1) of Directive 64/432/EEC)	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological examinations	Number of animals detected positive in bacteriological examination
	Herds	Animals	Number of herds	%	Number of herds	%	Interval between routine tuberculin tests	Number of animals tested			
Malta	158	20596			0	0	1	7168	0	0	0
Total	158	20596	0	0	0	0	1	7168	0	0	0

Footnote

Dairy herds are tested for tuberculosis on a yearly basis.
Malta has not yet obtained officially free status for bovine tuberculosis.

2.6. BRUCELLOSIS

2.6.1. General evaluation of the national situation

2.6.2. Brucella in foodstuffs

2.6.3. Brucella in animals

A. Brucella abortus in Bovine Animals

Status as officially free of bovine brucellosis during the reporting year

The entire country free

Malta has not obtained recognition as Officially free from Brucellosis. However the last outbreak of Brucellosis was during 1996, and no other cases were detected since this date.

Free regions

The two islands of Malta and Gozo are considered as one region.

Monitoring system

Sampling strategy

Serum samples from adult bovines at holdings. Serum samples from bovines prior to slaughter.

Frequency of the sampling

Yearly basis on holdings.

Type of specimen taken

Blood

Methods of sampling (description of sampling techniques)

A blood sample is taken from the caudal vein by staff of the Food and Veterinary Regulation Division.

Diagnostic/analytical methods used

Serum samples are tested using RBT (Rose Bengal Test). Any positive reactions are retested using CFT (Complement Fixation Test).

Vaccination policy

No vaccination against brucellosis takes place in the Maltese territory.

Other preventive measures than vaccination in place

Movement restrictions from holdings under suspicion.

Control program/mechanisms

The control program/strategies in place

All holdings are tested on a yearly basis.

Measures in case of the positive findings or single cases

Any bovine which tests positive to the CFT test is slaughtered. All bovines on the holding are retested after 3 weeks. In the mean time, movement restrictions are introduced on the holding.

B. Brucella melitensis in Sheep

Status as officially free of ovine brucellosis during the reporting year

The entire country free

Malta has not obtained recognition as Officially free from Brucellosis. However the last outbreak of Brucellosis was during 1996, and no other cases were detected since this date.

Free regions

The two islands of Malta and Gozo are considered as one region.

Monitoring system

Sampling strategy

Serum samples from ovines at holdings. Serum samples from ovines prior to slaughter.

Frequency of the sampling

Twice-yearly basis on holdings.

Type of specimen taken

Blood

Methods of sampling (description of sampling techniques)

A blood sample is taken from the jugular vein by staff of the Food and Veterinary Regulation Division.

Diagnostic/analytical methods used

Serum samples are tested using RBT (Rose Bengal Test). Any positive reactions are retested using CFT (Complement Fixation Test).

Vaccination policy

No vaccination against brucellosis takes place in the Maltese territory.

Other preventive measures than vaccination in place

Movement restrictions from holdings under suspicion.

Control program/mechanisms

The control program/strategies in place

All holdings are tested on a twice-yearly basis.

Measures in case of the positive findings or single cases

Any ovine which tests positive to the CFT test is slaughtered. All ovines on the holding are retested after 3 weeks. In the mean time, movement restrictions are introduced on the holding.

C. Brucella melitensis in Goat

Status as officially free of caprine brucellosis during the reporting year

The entire country free

Malta has not obtained recognition as Officially free from Brucellosis. However the last outbreak of Brucellosis was during 1996, and no other cases were detected since this date.

Free regions

The two islands of Malta and Gozo are considered as one region.

Monitoring system

Sampling strategy

Serum samples from ovines at holdings. Serum samples from caprines prior to slaughter.

Frequency of the sampling

Twice-yearly basis on holdings.

Type of specimen taken

Blood

Methods of sampling (description of sampling techniques)

A blood sample is taken from the jugular vein by staff of the Food and Veterinary Regulation Division.

Diagnostic/analytical methods used

Serum samples are tested using RBT (Rose Bengal Test). Any positive reactions are retested using CFT (Complement Fixation Test).

Vaccination policy

No vaccination against brucellosis takes place in the Maltese territory.

Other preventive measures than vaccination in place

Movement restrictions from holdings under suspicion.

Control program/mechanisms

The control program/strategies in place

All holdings are tested on a twice-yearly basis.

Measures in case of the positive findings or single cases

Any caprine which tests positive to the CFT test is slaughtered. All caprines on the holding are retested after 3 weeks. In the mean time, movement restrictions are introduced on the holding.

Table Bovine brucellosis in countries and regions that do not receive Community co-financing for eradication programme

Region	Total number of existing bovine		Officially free herds		Infected herds		Surveillance						Investigations of suspect cases								
							Serological tests			Examination of bulk milk samples			Information about abortions			Epidemiological investigation					
	Herds	Animals	Number of herds	%	Number of herds	%	Number of bovine herds tested	Number of animals tested	Number of infected herds tested	Number of bovine herds tested	Number of animals or pools tested	Number of infected herds	Number of notified abortions whatever cause	Number of isolations of Brucella infection	Number of abortions due to Brucella abortus	Number of animals tested with serological blood tests	Number of suspended herds	Number of positive animals: Serologically	Number of positive animals: BST	Number of animals examined microbio logically	Number of animals positive microbio logically
Malta	158	20596			0	0	126	9191	0	0	0	0	0	0	9191	0	0	0	0	0	0
Total	158	20596	0	0	0	0	126	9191	0	0	0	0	0	0	9191	0	0	0	0	0	0

Table Ovine or Caprine brucellosis - data on status of herds at the end of the period - Community co-financed eradication programmes

Region	Status of herds and animals under the programme													
	Total number of herds and animals under the programme		Unknown		Not free or not officially free				Free or officially free suspended		Free		Officially free	
					Last check positive		Last check negative							
	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Malta	2031	21044			0	0	1598	17915	0	0	2031	21044		
Total	2031	21044	0	0	0	0	1598	17915	0	0	2031	21044	0	0
Total - 1														

2.7. YERSINIOSIS

2.7.1. General evaluation of the national situation

2.7.2. Yersinia in foodstuffs

2.7.3. Yersinia in animals

2.8. TRICHINELLOSIS

2.8.1. General evaluation of the national situation

2.8.2. Trichinella in animals

Table Trichinella in animals

	Source of information	Sampling unit	Animals tested	Total animals positive for Trichinella	T. spiralis	Trichinella spp., unspecified
Pigs						
fattening pigs						
raised under controlled housing conditions in integrated production system	Food and Veterinary Regulation Division	Animal	3531	0		
Solipeds, domestic						
horses	Food and Veterinary Regulation Division	Animal	200	0		

2.9. ECHINOCOCCOSIS

2.9.1. General evaluation of the national situation

2.9.2. Echinococcus in animals

2.10. TOXOPLASMOSIS

2.10.1. General evaluation of the national situation

2.10.2. Toxoplasma in animals

2.11. RABIES

2.11.1. General evaluation of the national situation

A. Rabies General evaluation

History of the disease and/or infection in the country

Malta has been free from Rabies since the year 1911. Due to its geographical isolation from other countries, rabies can only enter the islands via infected animals being transported. For this reason Malta has had a very strict quarantine system to prevent the entry of Rabies. Nowadays Malta is in the Pet Travel Scheme and requires dogs and cats entering from other countries to be vaccinated against rabies and to be tested for rabies antibodies at least six months before entering the Maltese territory.

Recent actions taken to control the zoonoses

Malta is in the Pet Travel Scheme. Animals may enter the Maltese territory without remaining in quarantine so long as they possess a valid passport which entails vaccination against rabies and a blood test for rabies antibodies performed at least six months before entering Malta.

2.11.2. Lyssavirus (rabies) in animals

A. Rabies in dogs

Additional information

Only vaccinated dogs are tested for rabies so as to be eligible to travel with the Pet Travel Scheme.

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1. ESCHERICHIA COLI, NON-PATHOGENIC

3.1.1. General evaluation of the national situation

3.1.2. Antimicrobial resistance in Escherichia coli, non-pathogenic isolates

4. FOODBORNE OUTBREAKS

Foodborne outbreaks are incidences of two or more human cases of the same disease or infection where the cases are linked or are probably linked to the same food source. Situation, in which the observed human cases exceed the expected number of cases and where a same food source is suspected, is also indicative of a foodborne outbreak.

Table 12. Foodborne outbreaks in humans

Causative agent	General outbreak	Family outbreak	Total Number in persons			Source			Type of evidence	Location of exposure	Contributing factors
			ill	died	in hospital		Suspected	Confirmed			
1	2	3	4	5	6	7			8	9	10
Giardia		x	2							Ethiopia (imported)	
Giardia		x	2							Ethiopia (imported)	
Campylobacter, thermophilic		x	2		1	Unknown				Household	
Campylobacter, thermophilic	x		12			Chicken	x			Restaurant	
Campylobacter, thermophilic		x	2			chicken	x			Household	
Salmonella - S. Enteritidis	x		45		9	Eggs		x	Laboratory	Canteen	
Salmonella - S. Enteritidis		x	2		1	Fish	x			Household	
Salmonella - S. Enteritidis	x		6		1	Buffet		x	Laboratory	Restaurant	
Salmonella - S. Enteritidis		x	6		3	Baked rice with minced beef	x			Household	
Salmonella - S. Enteritidis		x	2			unknown				Household	
Salmonella - S. Enteritidis		x	3		1	Eggs	x			Household	
Campylobacter, thermophilic - C. jejuni		x	6			Unknown				Household	
Campylobacter, thermophilic - C. jejuni		x	3			Eggs	x			Household	
Campylobacter, thermophilic - C. jejuni		x	2			Chicken	x			Household	
Campylobacter, thermophilic - C. jejuni		x	4		1	Chicken	x			household	
Campylobacter, thermophilic - C. jejuni		x	3		1	Eggs	x			Household	
Campylobacter, thermophilic - C. jejuni		x	2		1	Chicken	x			household	
Campylobacter, thermophilic - C. cryaerophilus		x	3		1	Chicken	x			household	
Toxins - Scrombotoxin	x		2			Tuna	x			TakeAway	
Toxins - Scrombotoxin		x	3		1	Lampuki	x			Household	
Toxins - Scrombotoxin	x		15		1	Lampuki		x	Laboratory	Restaurant	

Footnote

The 2 outbreaks caused by Giardia were imported cases from Ethiopia