ZOONOSES MONITORING

MALTA

The Report referred to in Article 5 of Directive 92/117/EEC

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 2004

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: **Malta**

Reporting Year: **2004**

Institutions and laboratories involved in monitoring:

Laboratory name	Description	Contribution

PREFACE

This report is submitted to the European Commission in accordance with Article 5 of Council Directive 92/117/EEC[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 2004. 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] Council Directive 92/117/ECC of 17 December 1992 concerning measures for protection against specified zoonoses and specified zoonotic agents in animals and products of animal origin in order to prevent outbreaks of foodborne infections and intoxications, OJ L 62, 15.3.1993, p. 38

LIST OF CONTENTS

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 14.1 Susceptible animal populations: number of herds and holdings rearing animals

* Only if different than current reporting year

Animal species	Category of animals	Number of herds or flocks	Year*	Number of holdings	Year*
Cattle (bovine animals)	dairy cows and heifers			154	
	meat production animals			266	
	in total			420	
Ducks	in total	0		0	
Gallus gallus	mixed flocks/holdings			49	
	broilers			200	
	laying hens			42	
	parent birds for meat production line (1)			1	
	parent birds for egg production line (2)			1	
	in total			302	
Geese	in total	0		0	
Goats	in total (3)			1865	
Pigs	fattening pigs			13	
	breeding animals			127	
	multiplication animals			1	
	mixed herds			16	
	in total			157	
Sheep	in total (4)			1865	
Solipeds	horses - in total			1946	
Turkeys	in total	0		0	
Farmed reindeers	in total	0		0	
Farmed wild boars	in total	0		0	
Farmed deer	in total	0		0	

(1): One holding is present that breeds both layers parent stock and broilers parent stock.
(2): One holding is present that breeds both layers parent stock and broilers parent stock.
(3): Sheep and goat holdings are registered as ruminant holdings since in most instances both species are present on the same holding.
(4): Sheep and goat holdings are registered as ruminant holdings since in most instances both species are present on the same holding.

Table 14.2 Susceptible animal populations: number of animals

* Only if different than current reporting year

Animal species	Category of animals	Livestock numbers (live animals)	Year*	Number of slaughtered animals	Year*
Cattle (bovine animals)	dairy cows and heifers	18032			
	meat production animals	1630			
	in total	19662			
Ducks	in total	0		0	
Gallus gallus	broilers	1340000			
	laying hens	539000			
	parent birds for meat production line	4000			
	parent birds for egg production line	4000			
	in total	1887000			
Geese	in total	0		0	
Goats	in total	6583			
Pigs	in total	53300			
Sheep	in total	13103			
Solipeds	horses - in total	2136			
Turkeys	in total	0		0	
Farmed reindeers	in total	0		0	
Farmed wild boars	in total	0		0	
Farmed deer	in total	0		0	

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. Salmonellosis in humans

Table 3.4.1.A Salmonellosis in man - species/serotype distribution

Salmonella	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc	unknown status
	79	0	77	0	2	0	0
S. Bardo	2		2		0		
S. Derby	2		2		0		
S. Enteritidis	45		44		1		
S. Fyris	1		1		0		
S. Hadar	2		2		0		
S. Haifa	1		1		0		
S. Infantis	1		1		0		
S. Kambole	1		1		0		
S. Kentucky	1		1		0		
S. Kisii	4		4		0		
S. Mandera	1		1		0		
S. Typhimurium	10		10		0		
S. Virchow	3		3		0		
S. Gallinarum	1		1		0		
Other serotypes	4		3		1		

Table 3.4.1.B Salmonellosis in man - age distribution (Part A)

Age Distribution	S. Bardo			S. Derby			S. Enteritidis			S. Fyris			S. Hadar			S. Haifa		
	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F
<1 year	2		2				6	5	1				2		2			
1 to 4 years				1		1	23	9	14									
5 to 14 years							4	3	1							1		1
15 to 24 years							6	5	1									
25 to 44 years							2	1	1									
45 to 64 years							2	1	1	1	1							
65 years and older				1		1	2	2	0									
Age unknown																		
Total :	2	0	2	2	0	2	45	26	19	1	1	0	2	0	2	1	0	1

Table 3.4.1.B Salmonellosis in man - age distribution (Part B)

Age Distribution	S. Infantis			S. Kambole			S. Kentucky			S. Kisii			S. Lindenburg			S. Lovelace		
	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F
<1 year													1		1			
1 to 4 years																		
5 to 14 years																		
15 to 24 years																		
25 to 44 years	1		1															
45 to 64 years							1		1									
65 years and older				1		1				4	2	2				2	1	1
Age unknown																		
Total :	1	0	1	1	0	1	1	0	1	4	2	2	1	0	1	2	1	1

Table 3.4.1.B Salmonellosis in man - age distribution (Part C)

Age Distribution	S. Mandera			S. Typhimurium			S. Virchow			Salmonella spp.			S. Gallinarum		
	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F
<1 year				3	2	1	1		1	4	3	1	0	0	0
1 to 4 years				6	2	4	1		1				1	1	0
5 to 14 years				1	1	0							0	0	0
15 to 24 years				0	0	0							0	0	0
25 to 44 years	1	1		0	0	0							0	0	0
45 to 64 years				0	0	0							0	0	0
65 years and older				0	0	0	1		1				0	0	0
Age unknown															
Total :	1	1	0	10	5	5	3	0	3	4	3	1	1	1	0

Table 3.4.2 Salmonellosis in man - seasonal distribution

Month	S. Enteritidis	S. Typhimurium	Salmonella spp.
	Cases	Cases	Cases
January	4	0	0
February	2	1	2
March	3	1	1
April	5	0	0
May	3	0	0
June	4	0	1
July	4	0	5
August	5	0	3
September	3	2	6
October	1	0	4
November	9	5	3
December	2	1	1
not known			
Total :	45	10	26

2.1.3. Salmonella in foodstuffs

Table 3.3.1 Salmonella sp. in meat and meat products

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium
Pig meat								
fresh								
- at slaughter (1)					400	131		
Broiler meat								
fresh								
- at slaughter				25 grams	418	112	4	18

(1) : Testing of swine for salmonella was carried out serologically using an ELISA kit, and therefor only seropositivity has been obtained.

2.1.4. Salmonella in animals

Table 3.2.2 Salmonella sp. in other commercial poultry

	Source of information	Remarks	Epidemiological unit	Flocks tested	Flocks positive	S. Enteritidis	S. Typhimurium

(1) : Salmonella was isolated from the following samples:
-5 isolates from 28 dust samples,
-6 isolates from 31 sponge samples,
-3 isolates from 10 faecal samples,
All isolates were identified using API as salmonella spp. but not typed.

2.1.5. Salmonella in feedstuffs

2.1.6. *Salmonella* serovars and phagetype distribution

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.

2.1.7. Antimicrobial resistance in *Salmonella* isolates

Antimicrobial resistance is the ability of certain microorganisms to survive or grow in the presence of a given concentration of antimicrobial agent that usually would kill or inhibit the microorganism species in question. Antimicrobial resistant Salmonella strains may be transferred from animals or foodstuffs to humans.

2.2. CAMPYLOBACTERIOSIS

2.2.1. General evaluation of the national situation

2.2.2. Campylobacteriosis in humans

2.2.3. Campylobacter in foodstuffs

Table 6.2 Thermophilic Campylobacter spp. in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	C. coli	C. lari	C. upsaliensis	C. jejuni	Campylobacter spp.
Poultry meat										
fresh										
- at slaughter				25 grams	29	5	0	2	0	

2.2.4. Campylobacter in animals

2.2.5. Antimicrobial resistance in *Campylobacter* 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.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

According tho the local health Authotities there have not been any confirmed cases of listeria in humans in recent years.

2.3.2. Listeriosis in humans

2.3.3. Listeria in foodstuffs

Table 7.1 Listeria monocytogenes in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Definition used	Units tested	<100 cfu/g	>100 cfu/g	L. monocytogenes
Cheeses									
- at processing plant (1)				25 grams		249			2
Other milk									
milk for manufacture									
raw									
- at farm (2)				25 ml		250			5

(1) : Traditional Maltese cheeselets "Gbejniet" manufactured useing raw milk from mixed sheep and goat flocks.
(2) : Raw milk from mixed sheep and goat flocks for the production of traditional Maltese cheeselets "Gbejniet".

Footnote

During 2004 only testing of locally produced cheeselets was carried out.

2.4. VEROCYTOTOXIC ESCHERICHIA COLI

2.4.1. General evaluation of the national situation

2.4.2. Verocytotoxic Escherichia coli in humans

2.4.3. Pathogenic Escherichia coli in foodstuffs

2.4.4. Pathogenic Escherichia coli in animals

2.5. TUBERCULOSIS

2.5.1. General evaluation of the national situation

2.5.2. Tuberculosis in humans

Table 1.2.B Tuberculosis in man - age distribution

Age Distribution	M. bovis			M. tuberculosis			Mycobacterium spp.		
	All	M	F	All	M	F	All	M	F
<1 year									
1 to 4 years									
5 to 14 years									
15 to 24 years									
25 to 44 years									
45 to 64 years									
65 years and older									
Age unknown(1)									
Total :	0	0	0	0	0	0	0	0	0

(1) : test

2.5.3. 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 since the last outbreak in ----, 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 1.1.3 Tuberculosis in animals

	Source of information	Remarks	Epidemiological unit	Units tested	Units positive	M. bovis	M. tuberculosis
Goats				0	0	0	0
Pigs				0	0	0	0
Zoo animals				0	0	0	0
Sheep				0	0	0	0

Footnote

Goats, sheep and pigs are not tested for Tuberculosis in the Maltese islands.

1.1.1 Bovine tuberculosis

MANDATORY	**CATTLE**		
Number of herds under official control:	154	Number of animals under official control:	10948
	OTF bovine herds	**OTF bovine herds with status suspended**	**Bovine herds infected with tuberculosis**
Status of herds at year end (a):	154	0	0
New cases notified during the year (b):		0	0
	Units tested	**Units suspected**	**Units positive**
Routine tuberculin test (c) - data concerning herds:	78	0	0
Routine tuberculin test (c) - data concerning animals:	4329	0	0
	Animals slaughtered	**Animals suspected**	**Animals positive**
Routine post-mortem examination (d):	4822	0	0
		Herds suspected	**Herds confirmed**
Follow up of suspected cases in post-mortem examination (e):		0	0
Follow-up investigation of suspected cases: trace, contacts (f):		0	0
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (g):	0	0	0
Other routine investigations: tests at AI stations (h):	0	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (i):	0	0	0
Animals slaughtered (j):	0	0	0

VOLUNTARY	**CATTLE**		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (k):			
	Herds tested	**Herds suspected**	**Herds positive**
Other investigations: farms at risk (l):			
	Samples tested	***M. bovis*isolated**	
Bacteriological examination (m):			

1.1.2 Tuberculosis in farmed deer

MANDATORY	**FARMED DEER**		
Number of herds under official control:	0	Number of animals under official control:	0
	"OTF" herds	**"OTF" herds with status suspended**	**Herds infected with tuberculosis**
Status of herds at year end (a):			
New cases notified during the year (b):			
	Units tested	**Units suspected**	**Units positive**
Routine tuberculin test (c) - data concerning herds:			
Routine tuberculin test (c) - data concerning animals:			
	Animals slaughtered	**Animals suspected**	**Animals positive**
Routine post-mortem examination (d):			
		Herds suspected	**Herds confirmed**
Follow up of suspected cases in post-mortem examination (e):			
Follow-up investigation of suspected cases: trace, contacts (f):			
	Herds tested	**Herds suspected**	**Herds positive**
Other routine investigations: exports (g):			
Other routine investigations: tests at AI stations (h):			
	All animals	**Positives**	**Contacts**
Animals destroyed (i):			
Animals slaughtered (j):			
VOLUNTARY	**FARMED DEER**		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (k):			
	Herds tested	**Herds suspected**	**Herds positive**
Other investigations: farms at risk (l):			
	Samples tested	***M. bovis*isolated**	
Bacteriological examination (m):			

Footnote

Deer is not farmed in the Maltese islands.

2.6. BRUCELLOSIS

2.6.1. General evaluation of the national situation

2.6.2. Brucellosis in humans

2.6.3. Brucella in foodstuffs

2.6.4. 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. Milk Ring test on bulk tank samples at the dairy plant.

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.

2.1.1 Bovine brucellosis

MANDATORY	**CATTLE**		
Number of herds under official control:	420	Number of animals under official control:	11373
	OBF bovine herds	**OBF bovine herds with status suspended**	**Bovine herds infected with brucellosis**
Status of herds at year end (a):	420	0	0
New cases notified during the year (b):	0	0	0
	Animals tested	**Animals suspected**	**Animals positive**
Notification of clinical cases, including abortions (c):	0	0	0
	Units tested	**Units suspected**	**Units positive**
Routine testing (d1) - data concerning herds:	284	0	0
Routine testing (d2) - number of animals tested:	0	0	0
Routine testing (d3) - number of animals tested individually:	4296	1	0
		Herds suspected	**Herds confirmed**
Follow-up investigation of suspected cases: trace, contacts (e):			
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (f):	0	0	0
Other routine investigations: tests at AI stations (g):	0	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (h):	0	0	0
Animals slaughtered (i):	4822	0	0
VOLUNTARY	**CATTLE**		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (k):			
	Herds tested	**Herds suspected**	**Herds positive**
Other investigations: farms at risk (l):			
	Samples tested	**Brucella isolated**	
Bacteriological examination (m):			

2.1.2 Ovine and caprine brucellosis

MANDATORY	SHEEP AND GOATS		
Number of holdings under official control:	2109	Number of animals under official control:	19686
	OBF ovine and caprine holdings	**OBF ovine and caprine holdings with status suspended**	**OBF ovine and caprine holdings infected with brucellosis**
Status of herds at year end (a):	2109	0	0
New cases notified during the year (b):	0	0	0
	Animals tested	**Animals suspected**	**Animals positive**
Notification of clinical cases, including abortions (c):	0	0	0
	Units tested	**Units suspected**	**Units positive**
Routine testing (d) - data concerning holdings:	1636	0	0
Routine testing (d) - data concerning animals:	28106	8	2
		Holdings suspected	**Holdings confirmed**
Follow-up investigation of suspected cases: trace, contacts (e):(2)		7	0
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (f):	0	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (g):	0	0	0
Animals slaughtered (h):(1)	2	2	0
VOLUNTARY	**SHEEP AND GOATS**		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (i):			
	Holdings tested	**Holdings suspected**	**Holdings positive**
Other investigations: farms at risk (j):			
	Samples tested	**Brucella isolated**	
Bacteriological examination (k):			

(1) : These are not for human consumption.
(2) : All animals on holdings where one or more animals give a positive reaction to the Rose Bengal Test are re-tested after 21 days.

2.7. YERSINIOSIS

2.7.1. General evaluation of the national situation

2.7.2. Yersiniosis in humans

2.7.3. Yersinia in foodstuffs

2.7.4. Yersinia in animals

2.8. TRICHINELLOSIS

2.8.1. General evaluation of the national situation

A. Trichinellosis General evaluation

History of the disease and/or infection in the country

Malta is free from trichinella spp. There is no natural host in Malta as the isaland does not support a wild animal population.

2.8.2. Trichinellosis in humans

2.8.3. Trichinella in animals

A. Trichinella in pigs

Monitoring system

Frequency of the sampling

Other: Random on slaughter line

Type of specimen taken

Diaphragm muscle

Diagnostic/analytical methods used

Compression trichinoscopy

Additional information

The digestion method will be introduced later this year (late 2005).

B. Trichinella in horses

Monitoring system

Sampling strategy

Hoby animals slaughtered at the emergency slaughter house in Malta are subject to testing for survailance purposes.

Frequency of the sampling

Every slaughtered animal is sampled

Type of specimen taken

Diaphragm muscle

Diagnostic/analytical methods used

Compression trichinoscopy

Table 4.1 Trichinella in animals

	Source of information	Remarks	Epidemiological unit	Animals tested	Animals positive
Pigs				840	0
Solipeds				249	0

2.9. ECHINOCOCCOSIS

2.9.1. General evaluation of the national situation

2.9.2. Echinococcosis in humans

2.9.3. Echinococcus in animals

2.10. TOXOPLASMOSIS

2.10.1. General evaluation of the national situation

2.10.2. Toxoplasmosis in humans

2.10.3. 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. Rabies in humans

A. Rabies in humans

History of the disease and/or infection in the country

Malta is free from rabies since the year 1911.

2.11.3. 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.

Table 5.1 Rabies in animals

		Source of information	Remarks	Animals tested	Animals positive

Footnote

No case of Rabies has been reported in humans or animals since 1911. Only testing of sera from vaccinated cats and dogs for Pet Travel Scheme reasons is performed.

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1. E. COLI INDICATORS

3.1.1. General evaluation of the national situation

3.1.2. Antimicrobial resistance in *Escherichia coli* 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.