



EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit G5 - Veterinary Programmes

SANCO/10724/2012

*Programmes for the eradication, control and monitoring of certain
animal diseases and zoonoses*

Survey programme for Transmissible Spongiform Encephalopathies (TSEs)

Approved* for 2012 by Commission Decision 2011/807/EU

Cyprus

* in accordance with Council Decision 2009/470/EC

Standard requirements for the submission of programmes of eradication and monitoring of TSE

version : 2.1

1. Identification of the programme

Member state : KYPROS

Disease : Transmissible Spongiform Encephalopathies

Request of co-financing for the year :

2012

1.1 Contact

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2. Description of the programme

(max. 32000 chars) :

Monitoring in bovine animals

The objective of the programme in bovines is the implementation of the surveillance programme for BSE as laid down in ANNEX III, Chapter A, (I) of Regulation 999/2001 as amended.

Brain samples for BSE testing are taken from all bovines of the following groups:

- bovines exhibiting clinical signs of neurological disease
- dead animals over the 48 months of age
- normal slaughtered animals for human consumption over 72 months of age
- emergency slaughtered animals over 48 months of age
- animals over 48 months of age with clinical signs at ante-mortem

The objectives of the programme in small ruminants are:

- a. To implement a TSE monitoring and surveillance programme as laid down in Reg. (EC) 999/2001
- b. To identify all scrapie infected flocks
- c. To implement a breeding programme for TSE resistance in the entire sheep and goat population, which is considered an essential tool to combat the disease
- d. To implement in conjunction with the breeding programme, a solid identification system by means of

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electronic ID, which is a prerequisite for the effective control of the breeding programme and of the movements

The main elements of the programme are:

- a) The regular inspections of all flocks
- b) Individual identification of all animals by means of ruminal boluses and eartags
- c) The movement restrictions for infected flocks with the exception of on-movements to infected flocks of ARR/ARR rams or of ARR/ARR or ARR/AXX ewes or off-movements of ARR/ARR animals.
- d) The confiscation, killing and destruction of animals with clinical symptoms or sheep with susceptible genotypes or he-goats N146N and compensation of the farmers.
- e) The testing of confiscated suspect animals in accordance to point 3.2 of Chapter C of ANNEX X to Regulation (EC) 999/2001.
- f) The examination of fallen stock and healthy slaughtered animals with rapid test
- g) The genotyping of the lambs intended for breeding
- h) The obligatory use of ARR/ARR rams for all flocks in order to gradually replace the animals with susceptible genotypes with animals of the resistant genotype ARR/ARR or with animals bearing at least one ARR allele and no VRQ allele.
- i) The genotyping of all kids to be born in 2012 focusing at codons 146 and 154 of the goat PrP protein gene.
- j) The governmental nucleus units will continue to provide the farmers with ARR/ARR rams or 146S or 146D he-goats. In addition to the provision of rams, artificial insemination with fresh or frozen semen from S146 or D146D will be practiced.

3. Description of the epidemiological situation of the disease

(max. 32000 chars):

BSE
The bovine holdings in Cyprus are currently 360 and the animal population counts 56180 animals. About 29000 bovines are over the 24 months of age and 14200 are over the 48 months of age.
BSE has never been diagnosed in Cyprus so far. During the years 2001 to 2010, more than 73000 animals have been examined with rabid tests, all with negative results.

SCRAPIE
The disease was first diagnosed in Cyprus in 1985 in sheep and in 1986 in goats. Since then 1019 flocks were found positive.
Since 1985, a number of infected flocks have been culled or closed down.
Currently, 722 infected flocks are still active.

For additional information please refer to the attached file.

4. Measures included in the programme

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4.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

(max. 32000 chars) :

According to "the implementation of Community Regulations in the Veterinary field Law No. 149(I) 2004" Official Competent Authority responsible for the organization, implementation and monitoring of the programme are the Veterinary Services of The Ministry of Agriculture, Natural Resources and Environment.

4.2 Description and delimitation of the geographical and administrative areas in which the programme is to be applied

(max. 32000 chars) :

The TSE monitoring and control programme will be applied over the entire area of the Republic of Cyprus, which is under the effective control of the Government of Cyprus.

4.3 System in place for the registration of holdings

(max. 32000 chars) :

All the holdings of bovine, ovine and caprine animals are registered in the electronic Database of the Animal Identification and Registration Scheme.
Information regarding a holding including its geographical coordinates is recorded.
All premises, even with only one animal, are uniquely registered. The system in place for the registration of the holdings and the codification used is as follows:
CYS1234567 (for sheep and goats)
CYB1234567 (for bovines)

Where

CY= Country code

S = applies for holdings with sheep or goats B = applies for holdings with bovines

1 = District code (Values from 1-6)

234= together with the district code builds the geographical code of the village or area where the holding is located

567= a consecutive number beginning from 001 to 999

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4.4 System in place for the identification of animals

(max. 30000 chars) :

The Animal Identification and Registration Scheme foresees the individual identification of all animals, bovines, ovines or caprines.

A full functioning web-enabled electronic Database is in place.

All bovine animals according to Regulation 1760/2000/EC and all sheep and goats in compliance with the provisions of Regulation 21/2004, are individually identified, registered and recorded in the computerized database.

The bovine animals are identified with plastic eartags on both ears. Sheep and goats are identified by a ruminal bolus and plastic eartags where this is possible according to the size of the pinna. The identification of sheep and goats is carried out by the personnel of the Veterinary Services.

The eartag code is of the following format:

CY2 12345678

CY = Country code

2 = The first digit following the country code represents the animal kind. The digit 2 as in our example represents a small ruminant thus a sheep or a goat. The digit 1 instead represents a bovine animal.

234567= a consecutive number

8 = check digit (calculated by a formula)

The ruminal boluses bear the country code (196) followed by 0B's up to the last 8 digits of the code which follow the code format described above. Each ruminal bolus is packed together with the corresponding eartag, on which the last 8 digits of the relevant ruminal bolus is printed, plus the check digit as described above.

The 20gr boluses are used for both lambs and kids. They can be applied to lambs as from the age of 35-40 days and to kids as from the age of 55 - 60 days.

This is a limitation which has to be considered in order to implement in a manageable manner, the RFID in conjunction with the genotyping and the slaughtering for human consumption of kids until the age of 3 months.

4.5 Measures in place as regards the notification of the disease

(max. 32000 chars) :

According to the Animal(s) Health Law 109(I) 2001, Article 6, it is compulsory for every one to report without any delay to the official Veterinary Services or to the nearest Police Station the suspicion of BSE or Scrapie.

In Cyprus BSE is a notifiable disease since June 1990 and Scrapie since 1987.

In the case of notification the official competent authority immediately applies all the foreseen by the law measures and also any other measures that are considered as necessary.

During their regular visits to the farms, the Veterinary Officers pay special attention to identify animals with suspect TSE signs.

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4.6 Monitoring

4.6.1 Monitoring in bovine animals

	Estimated number of tests	
Animals referred to in Annex III, Chapter A, Part I, point 2.1, 3 and 4 of Regulation (EC) No 999/2001 of the European Parliament and of the Council	1 000	
Animals referred to in Annex III, Chapter A, Part I, point 2.2 of Regulation (EC) No 999/2001	3 000	
Other please specify here	0	X
	Add a new row	

4.6.2 Monitoring in ovine animals

Estimated population of adult ewes and ewe lambs put to the ram

	Estimated number of tests	
Ovine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) No 999/2001	250	
Ovine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001	1 500	
Ovine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001	1 500	
Ovine animals referred to in Annex VII, Chapter A, point 3.4(d) of Regulation (EC) No 999/2001	250	
Ovine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001	0	
Other please specify here	0	X
	Add a new row	

4.6.3 Monitoring in caprine animals

Estimated population of female goats and female kids mated

	Estimated number of tests	
Caprine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) No 999/2001	250	
Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001	1 500	

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Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001	1 500	
Caprine animals referred to in Annex VII, Chapter A, Part II, point 3.3(c) of Regulation (EC) No 999/	0	
Caprine animals referred to in Annex VII, Chapter A, Part II, point 5(b)(ii) of Regulation (EC) No 999	0	
Other please specify here	0	X
ADD A NEW ROW		

4.6.4 Discriminatory tests

	Estimated number of tests	
Primary molecular testing referred to in Annex X, Chapter C, point 3.2(c)(i) of Regulation (EC) No 999	250	

4.6.5 Genotyping of positive and randomly selected animals

	Estimated number	
Animals referred to in Annex III, Chapter A, Part II, point 8.1 of Regulation (EC) No 999/2001	0	
Animals referred to in Annex III, Chapter A, Part II, point 8.2 of Regulation (EC) No 999/2001	0	

4.7 Eradication

4.7.1 Measures following confirmation of a BSE case

4.7.1.1 Description

(max. 32000 chars) :

In the case where an animal is proven to be positive to BSE by laboratory examination:
 BΩ All parts of the body of the animal, which has been sampled, must be completely destroyed.
 BΩ A thorough epidemiological investigation is carried out to identify all animals at risk.
 BΩ All animals and products of animal origin that have been identified as being at risk must be killed and completely destroyed by incineration.
 BΩ Decontamination procedures will be undertaken on any materials and equipment that came in contact with slaughtered animals

4.7.1.2 Summary table

	Estimated number	
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Animals to be killed under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) No 999/2001	0
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4.7.2 Measures following confirmation of a scrapie case

4.7.2.1 Description

(max. 32000 chars) :

In the case of TSE suspicion in sheep and goats or where an animal is proven to be positive to Scrapie by laboratory examination, the following measures are applied by the Veterinary Services to the holding of origin of the positive animal:

B^Q the holding is placed under movement restrictions,

B^Q the trade of animals for the aims of reproduction is only allowed for the categories of animals as laid down under Point 3.3, Chapter A of Annex VII to Reg. (EC) 999/2001,

B^Q a written notification is given to the farmers about the applied restrictions on the holding

B^Q an analytical epidemiological investigation is carried out in order to detect the possible source of infection and an eventual spreading of the disease,

B^Q suspect animals are confiscated and their market value is estimated

B^Q confiscated suspect animals are killed, sampled and forwarded to the incinerator for complete destruction

B^Q primary molecular tests are carried out according to the provisions of Chapter C of Annex X to Reg. (EC) 999/2001 as amended

B^Q frequent inspections of the affected units are then carried out by the Veterinary Services for the early detection of suspect scrapie affected animals

B^Q the Veterinary Services include the farm in the list of priority to provide it with ARR/ARR rams or 146S or 146D he-goats from the nucleus units as soon as such animals are available.

4.7.2.2 Summary table

	Estimated number
Animals to be killed under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001	25 000
Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001	0

4.7.3 Breeding programme for resistance to TSEs in sheep

4.7.3.1 General description

Description of the programme according to the minimum requirements set out in Annex VII, Chapter B of Regulation (EC) No 999/2001

(max. 32000 chars) :

The PrP-genotyping of lambs intended for breeding and of kids will be continued also in 2012. Aim of the programme is to apply selective breeding for resistance in the flocks and increase the frequency of the ARR allele within the ovine population in Cyprus and the frequency of the 146S or 146D

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allele in the goat population.

The Ministerial Order 545/2005 issued on the 2nd of December 2005 provides for the genotyping of all ovine animals over 35 days of age intended to remain in the flock for breeding purposes. It also provides for the Electronic Identification of the genotyped animals.

The Ministerial Order 44/2008 amending the Order 545/2005 provides after the 1st of July 2008 for exclusive use for breeding purposes only of ARR/ARR rams in all farms with ovine animals.

The breeding for resistance is compulsory for all flocks with ovine animals.

Since 2004 more than 500,000 ovine animals have been genotyped thanks to the financial contribution of the Community approved by the European Commission for that purpose.

The determination of the PrP-genotype of all the young ovine animals on the farms will provide the Veterinary Services and the farmers the possibility to select the resistant and productive animals for breeding and for the substitution purposes in the flock.

A small scale genotyping programme covering 30,000 animals and cofinanced by the European Union was applied in 2004. Flocks were selected according to the numbers of resistant rams received.

The aim of this selection was to identify as many ARR/ARR animals as possible so that they could be introduced in other flocks with scrapie. Because the capacity of the two nucleus units was relatively limited and the demand for ARR/ARR rams very high, the genotyping programme of 2004 was planned so to help in the direction of creating other private nucleus units. The identification of as many ARR/ARR rams as possible facilitated an exchange of these animals between the flocks. This exchange of rams between flocks helped to avoid possible inbreeding.

4.7.3.2 Summary table

	Estimated number	
Ewes to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC)	350 000	
Rams to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC)	0	

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5. Costs

5.1 Detailed analysis of the costs

(max. 32000 chars) :

In 2012 it is estimated that about 4000 bovine animals will be tested with a rapid test with a unitary cost per test of 10 Euro. In sheep and goats , it is estimated that about 6750 tests will be carried out with a unitary cost of 27 Euro per test. The Primary molecular tests on index cases and additional cases in 2012 will be approx. 250 with a unitary cost of 175 Euro. The breeding programme will cover both sheep and goats. In sheep, it will cover the lambs to be born in 2012, which will be kept for breeding. In goats the programme will cover all kids to be born in 2012, so as to allow a faster selection towards the resistant genotypes. It is estimated that about 150000 lambs and 200000 kids will be tested at a unitary cost of 7 Euro.

As regards the confiscation of bovine animals, even though it is actually not expected to have a positive BSE case, we would suggest to allocate an amount of 25000 Euro in the case an emergency occurs.

In sheep and goats, it is estimated that about 25000 animals will be confiscated. The numbers include suspect animals and sheep and goats of the susceptible genotypes. Depending on the outcome of the court case related to the slaughtering of animals for human consumption, this number might be significantly lower.

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5.2 Summary of costs

Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested
1. BSE testing					
Rapid tests	BioRad TeSeE	4 000	8	32000	yes X
				Add a new row	
Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested
2. Scrapie testing					
Rapid tests	BioRad TeSeE	6 750	27	182250	yes X
				Add a new row	
Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested
3. Discriminatory testing					
Primary molecular tests	CEA WB	250	175	43750	yes X
				Add a new row	
Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested
4. Genotyping					
4.1 Determination of genotype of animals in the framework of the monitoring and eradication measures laid down by Regulation (EC) No 999/2001	Almost the entire population is genotyped in the framework of the breeding programme for resistance	0	0	0	no X

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		Add a new row				Add a new row			
4.2 Determination of genotype of animals in the framework of a breeding programme	Lambs	150 000	7	1050000	yes				X
4.2 Determination of genotype of animals in the framework of a breeding programme	Kids	200 000	7	1400000	yes				X
				Add a new row					
5. Compulsory slaughter									
Costs related to									
5.1 Compensation for bovine animals to be killed /slaughtered under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) No 999/2001	Although not expected to have a positive case, 25000 Euro should be allocated as a precaution	1	25000	25000	yes				X
				Add a new row					
5.2 Compensation for ovine and caprine animals to be killed /slaughtered under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001	Suspect sheep and goats and sheep and goats of susceptible genotypes. Depending on the outcome of the court case related to the slaughter of animals for human consumption, the number could be significantly lower. 	25 000	130	3250000	yes				X
				Add a new row					
Total				5 983 000,00 €					

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Attachments

IMPORTANT :

- 1) The more files you attach, the longer it takes to upload them .
- 2) This attachment files should have one of the format listed here : [.zip](#), [.jpg](#), [.jpeg](#), [.tiff](#), [.tif](#), [.xls](#), [.doc](#), [.bmp](#), [.pna](#).
- 3) The total file size of the attached files should not exceed 2 500Kb (+- 2.5 Mb) . You will receive a message while attaching when you try to load too much.
- 4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD** ALL THE ATTACHED FILES. Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!
- 5) Zip files cannot be opened (by clicking on the Open button) . All other file formats can be opened.

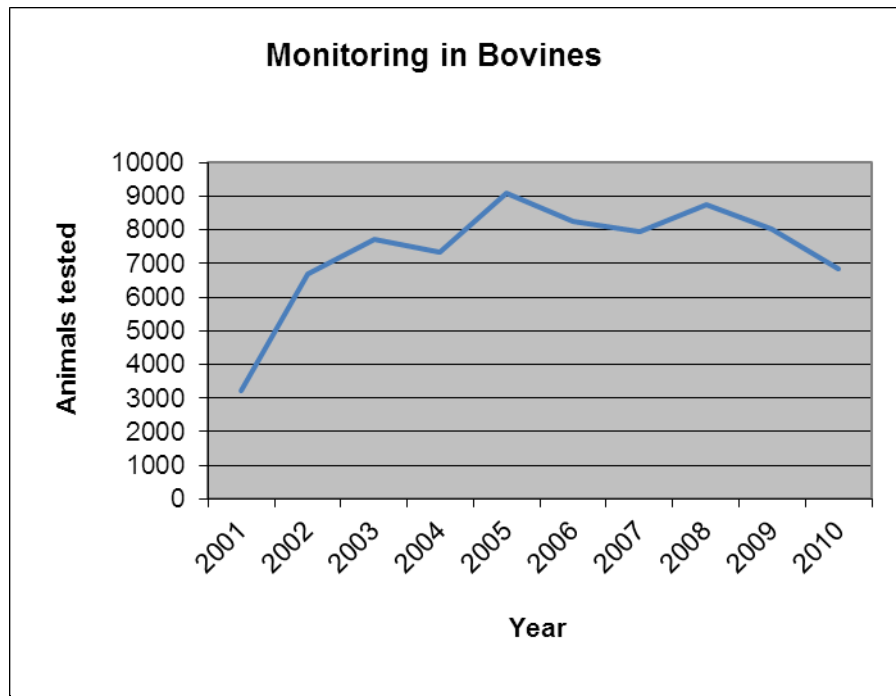
EPIDEMIOLOGICAL DATA

BOVINES

Since 2001, more than 73,000 animals have been tested with rapid tests according to the monitoring programme laid down in Annex III, Chapter A, (I) of Regulation 999/2001 as amended. Taking into account the adult bovine population, which is about 29,000 animals, more than twice of the number of the adult population has been tested. No BSE case has ever been detected in Cyprus.

Figure 1, displays the number of tested animals per year. The decrease of the number of tested animals during 2010 is due to the fact that since February 2010, Cyprus has been applied a revised monitoring programme according to the Decision 2010/66/EC .

Figure 1: Monitoring in bovines

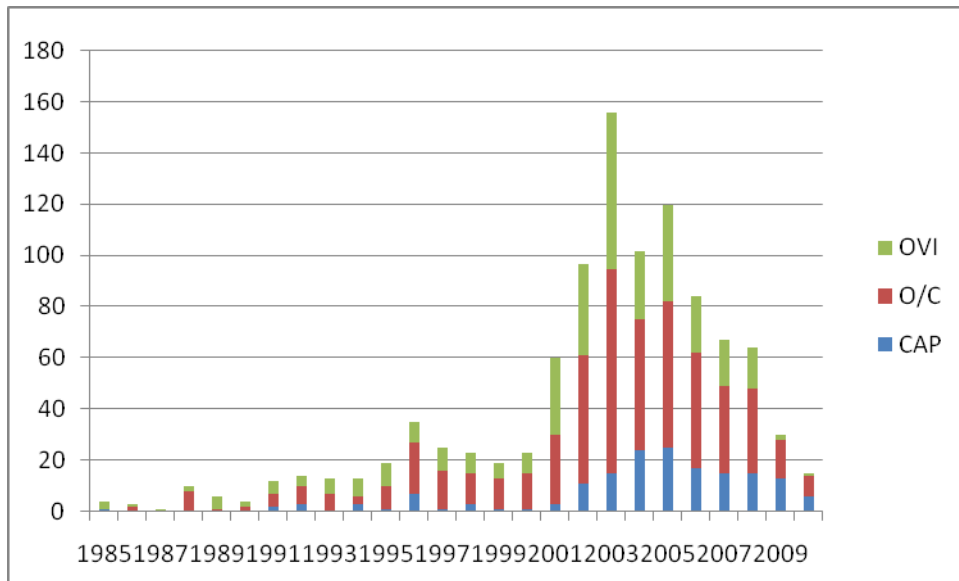


SHEEP & GOATS

Since 1985, 1019 scrapie outbreaks were diagnosed. The majority of the outbreaks were in mixed flocks (sheep and goats). The distribution of the new outbreaks per year and farm kind is presented in Figure 2. In 2002, 2003, 2004 and 2005 an abrupt increase in the number of outbreaks was observed. The increase in the number of outbreaks diagnosed was the outcome of:

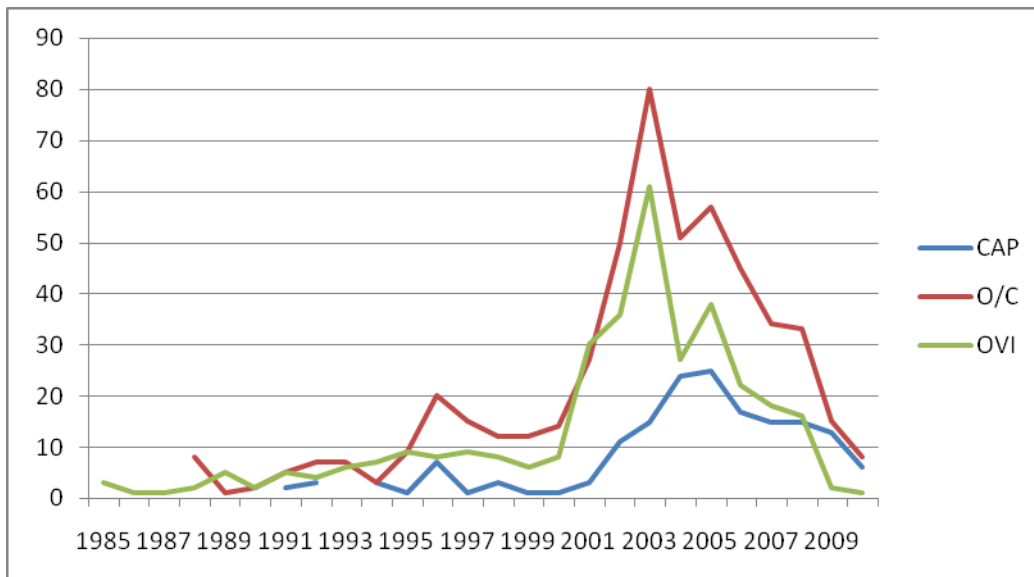
- Good epidemio-surveillance system implemented by VS
- The decision of the VS to provide rams from the nucleus units only to infected flocks.

Figure 2: New outbreaks per year and farm category



As a result of the breeding program which is applied on all flocks rearing sheep in Cyprus since 2004, and the significant improvement of the resistance in sheep, the number of the new outbreaks in OVI flocks and O/C flocks has a declining tendency (Figure 3). In 2010, the number of the new outbreaks in CAP herds has also shown a declining tendency, probably related to the implementation of a breeding programme for resistance in the goats of Cyprus since 2009.

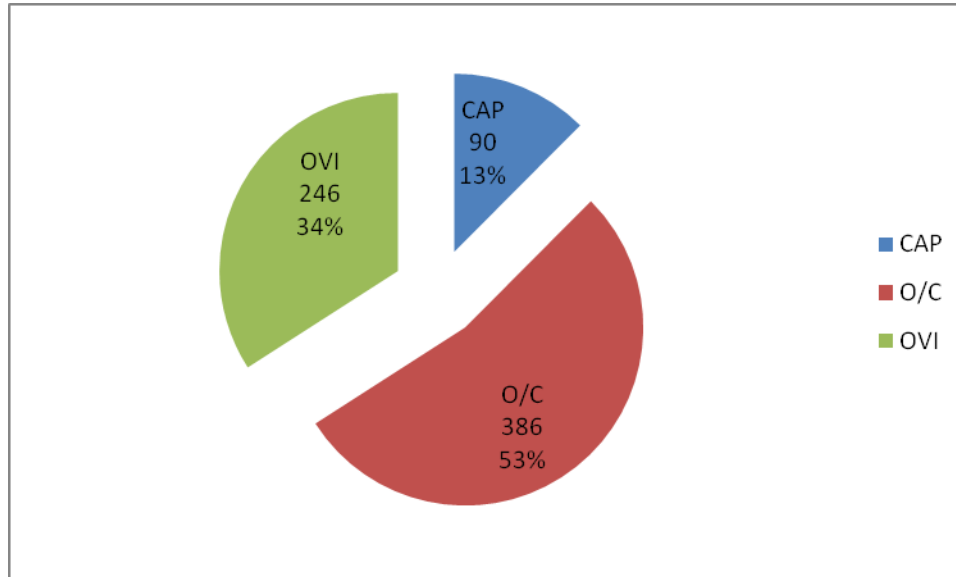
Figure 3: Trend of new outbreaks per farm kind



Currently, there are 722 scrapie infected flocks, which are still in operation. These flocks represent the 22.6% of the total active sheep and goats flocks. These figures are permanently changing since there are infected flocks closing down and there are also new outbreaks which are added to the

known infected flocks. Figure 4, presents the number and the proportion of the active scrapie infected flocks according to their farm kind (OVI=only sheep, O/C=Sheep and goats, CAP=only goats).

Figure 4: All currently active infected flocks



Figures 5 and 6 present the situation as regard the confiscation of animals. Since 2009, the confiscated animals comprise of animals with suspect clinical signs and of animals that cannot be slaughtered for human consumption either because of their PrP genotype or their age. As a result of the implementation of the breeding programme for resistance in sheep, the number of confiscated animals is permanently declining. On the contrary, the number of confiscated goats is rising, not because mainly an increase in the suspect cases is observed but moreover due to the prohibition of slaughtering for human consumption of the animals from scrapie infected flocks, which are older than 3 months of age.

Figure 5: Number of confiscated animals per year

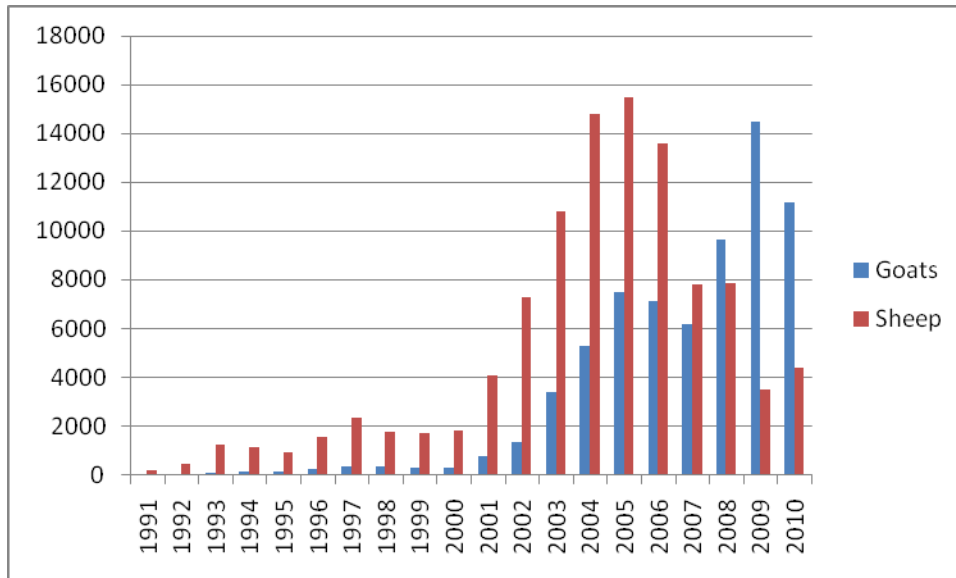
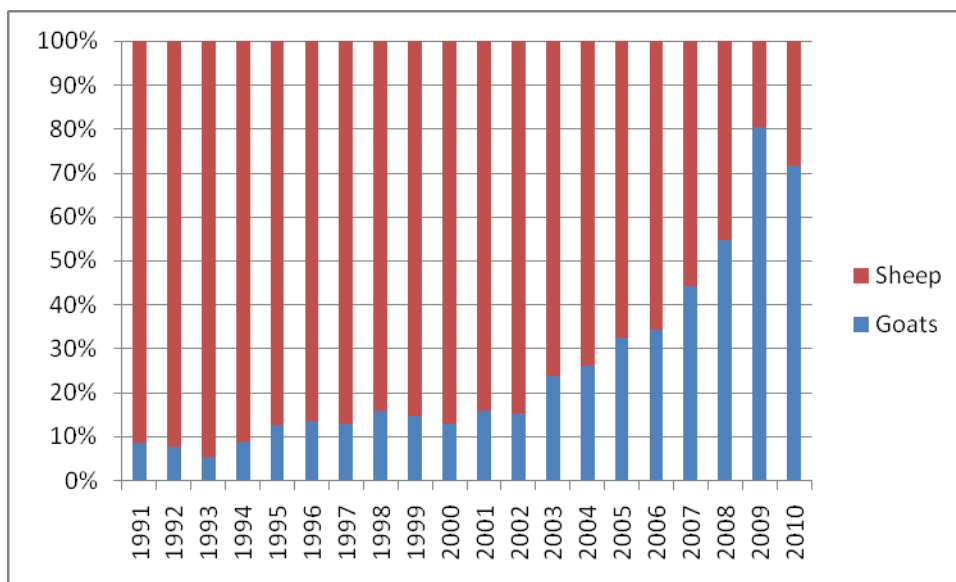


Figure 6: Trend of confiscations per animal kind



As regard the breeding programme for TSE resistance in sheep, out of 634 active infected flocks with sheep, 584 are classified in the Cat II (using only ARR/ARR rams), 4 are classified as Cat I (all animals are with ARR/ARR genotype) and 46 are Cat III (also rams other than ARR/ARR are present in the flock or the farmer did not submit the relevant information) and are in the process to be classified as Cat II. Rams other than ARR/ARR are either castrated and send for slaughter (if bearing 1 ARR allele) or confiscated and culled.

Figure 7: Categorization for TSE resistance in infected flocks

