



EUROPEAN COMMISSION  
HEALTH & CONSUMERS DIRECTORATE-GENERAL  
Unit 04 - Veterinary Control Programmes

SANCO/12973/2010

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

## **Monitoring and eradication programme of TSE, BSE and scrapie**

**Approved\* for 2011 by Commission Decision 2010/712/EU**

**Cyprus**

\* in accordance with Council Decision 2009/470/EC

**Program for Eradication : ANNEX 3**

<b>Submission number</b>	1272624842460-344
<b>Submission date</b>	30/04/2010 12:54:03
<b>1. Identification of the programme</b>	
<b>Country Geographical English Name</b>	Cyprus
<b>Disease</b>	Transmissible Spongiform Encephalopathies
<b>Request period From</b>	2011
<b>Request period To</b>	2011
<b>1.1 Contact</b>	
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**2. Description of the programme**

The objective of the programme in bovines, is the implementation of the surveillance programme for BSE as laid down in Regulation 999/2001 as amended. Samples are taken from all bovines of the following groups:

- bovines exhibiting clinical signs of neurological disease
- fallen stock of over 24 months of age
- normal slaughtered animals for human consumption over 48 months of age
- emergency slaughtered animals over 24 months of age
- animals over 24 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 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 genotyping programme, a solid identification system by means of 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 ear tags
- 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 goats
- d) The confiscation, killing and destruction of animals with clinical symptoms or sheep and goats with sensitive genotypes and compensation of the farmers.
- e) The testing of confiscated suspect animals is according 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 use of ARR/ARR rams is obligatory for all flocks in order to gradually replace the sensitive animals with animals of the resistant genotype ARR/ARR or w
- i) The genotyping of all kids to be born in 2011 focusing at codon 146 of the goat PrP protein gen.
- 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, artific

### **3. Description of the epidemiological situation of the disease**

BSE

The bovine holdings in Cyprus are currently 354 and the animal population counts 54841 animals. A total of 28190 bovines are over the age of 24 months. BSE has never been diagnosed in Cyprus so far. From 2001 to 2009, more than 67000 animals have been examined with rapid tests, all with negative results.

SCRAPIE

The disease was first diagnosed in Cyprus in 1985. Since then 1006 flocks were found positive. Since 1985, a number of infected flocks have been culled or closed down. Currently, 723 infected flocks are still active.

### **4. Measures included in the programme**

#### **4.1 Designation of the central authority in charge of supervising and coordinating the departements responsible for implementing the programme**

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**

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**

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)

#### **4.4 System in place for the identification of animals**

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 ear tags on both ears. Sheep and goats are identified by a ruminal bolus and plastic ear tags 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 ear tag 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 0's up to the last 8 digits of the code which follow the code format described above. Each ruminal

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

#### **4.5 X Measures in place as regards the notification of the disease**

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.

<b>4.6 <input type="checkbox"/> Monitoring</b>	
<b>4.6.1 <input type="checkbox"/> Monitoring in bovine animals</b>	

Description	Nbr
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	1.500,
Animals referred to in Annex III, Chapter A, Part I, point 2.2 of Regulation (EC) No 999/2001	7.500,
Other please specify here	0,
<b>Sum:</b>	<b>9.000,</b>

4.6.2 <input type="checkbox"/> Monitoring in ovine animals	
Description	Nbr
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	0,
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,
<b>Sum:</b>	<b>3.250,</b>

4.6.3 <input type="checkbox"/> Monitoring in caprine animals	
Description	Nbr
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 3.3(c) of Regulation (EC) No 999/2001	0,
Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001	1.500,
Caprine animals referred to in Annex III, Chapter A, Part II, point 5(b)(ii) of Regulation (EC) No 999/2001	0,
Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001	1.500,
<b>Sum:</b>	<b>3.250,</b>

4.6.4 <input type="checkbox"/> Discriminatory tests	
Description	Nbr
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 3.3(c) of Regulation (EC) No 999/2001	0,
Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001	1.500,
Caprine animals referred to in Annex III, Chapter A, Part II, point 5(b)(ii) of Regulation (EC) No 999/2001	0,

Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001	1,500,
<b>Sum:</b>	<b>3,250,</b>

<b>4.6.5 <input type="checkbox"/> Genotyping of positive and randomly selected animals</b>	
<b>Description</b>	<b>Nbr</b>
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	1,500,
Animals referred to in Annex III, Chapter A, Part I, point 2.2 of Regulation (EC) No 999/2001	7,500,
Other please specify here	0,
<b>Sum:</b>	<b>9,000,</b>

<b>4.7 <input type="checkbox"/> Eradication</b>
<b>4.7.1 <input type="checkbox"/> Measures following confirmation of a BSE case</b>
<b>4.7.1.1 Description</b>
In the case where an animal is proven to be positive to BSE by laboratory examination: <ul style="list-style-type: none"> <li>• All parts of the body of the animal, which has been sampled, must be completely destroyed.</li> <li>• A thorough epidemiological investigation is carried out to identify all animals at risk.</li> <li>• All animals and products of animal origin that have been identified as being at risk must be killed and completely destroyed by incineration.</li> <li>• Decontamination procedures will be undertaken on any materials and equipment that came in contact with slaughtered animals</li> </ul>

<b>4.7.1.2 Summary table</b>	
<b>Description</b>	<b>Nbr</b>
Animals to be killed under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) No 999/2001	0,
<b>Sum:</b>	<b>0,</b>

<b>4.7.2 <input type="checkbox"/> Measures following confirmation of a scrapie case</b>
<b>4.7.2.1 Description</b>

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:

- the holding is placed under movement restrictions,
- 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,
- a written notification is given to the farmers about the applied restrictions on the holding
- an analytical epidemiological investigation is carried out in order to detect the possible source of infection and an eventual spreading of the disease,
- suspect animals are confiscated and their market value is estimated
- confiscated suspect animals are killed, sampled and forwarded to the incinerator for complete destruction
- primary molecular tests are carried out according to the provisions of Chapter C of Annex X to Reg. (EC) 999/2001 as amended
- frequent inspections of the affected units are then carried out by the Veterinary Services for the early detection of suspect scrapie affected animals
- 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 s

#### 4.7.2.2 Summary table

Description	Nbr
Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001	0,
Animals to be killed under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001	35.000,
<b>Sum:</b>	<b>35.000,</b>

#### 4.7.3 Breeding programme for resistance to TSEs in sheep

##### 4.7.3.1 General description



The PrP-genotyping of lambs intended for breeding and of kids will be continued also in 2011. 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 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 420,000 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

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 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 capa

4.7.3.2 Summary table	
Description	Nbr
Ewes to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC)	320.000,
Rams to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC)	0,
<b>Sum:</b>	<b>320.000,</b>

**5.  Costs**

**5.1 N Detailed analysis of the costs**

5.2.3 Summary of costs			
Costs related to	Specification	Number of units	Total amount in Community funding
Rapid tests	BioRad TeSeE test	9.000,	EUR 90.000, yes

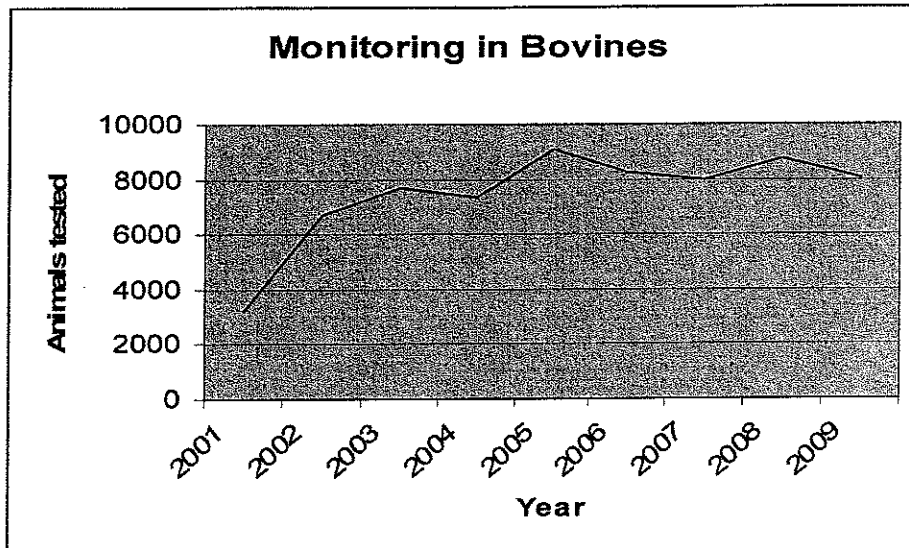
Rapid tests	BioRad TeSeE test	6.500,	27,	175.000,	yes
Primary molecular tests	BioRad Discriminatory WB	500,	175,	87.500,	yes
4.1 Determination of genotype of animals in the framework of the monitoring and eradication measures laid down by Regulation (EC) No	Almost the entire population is genotyped under the breeding programme	0,	0,	0,	no
4.2 Determination of genotype of animals in the framework of a breeding programme	100000 lambs kept for breeding	100.000,	7,	700.000,	yes
4.2 Determination of genotype of animals in the framework of a breeding programme	220000 kids to be borne in 2011	220.000,	7,	1.540.000,	yes
5.1 Compensation for bovine animals to be killed /slaughtered under the requirements of Annex VII, Chapter A, point 2.1 of Regulation	Although not expected to have a positive case, 25000 Euro should be allocated as a precaution	1,	25.000,	25.000,	yes
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.	35.000,	160,	5.600.000,	yes
	<b>Sum:</b>	<b>371.001,</b>		<b>8.218.000,</b>	
	<b>Sum:</b>	<b>371.001,</b>	<b>Sum:</b>	<b>8.218.000,</b>	

## EPIDEMIOLOGICAL DATA

### BOVINES

Since 2001, more than 67000 animals have been tested with rapid tests. Taking account of the adult bovine population, which is about 28000 animals, more than twice of the number of the adult population has been tested. No case on BSE has been diagnosed until now. Figure 1, displays the number of tests carried out per year.

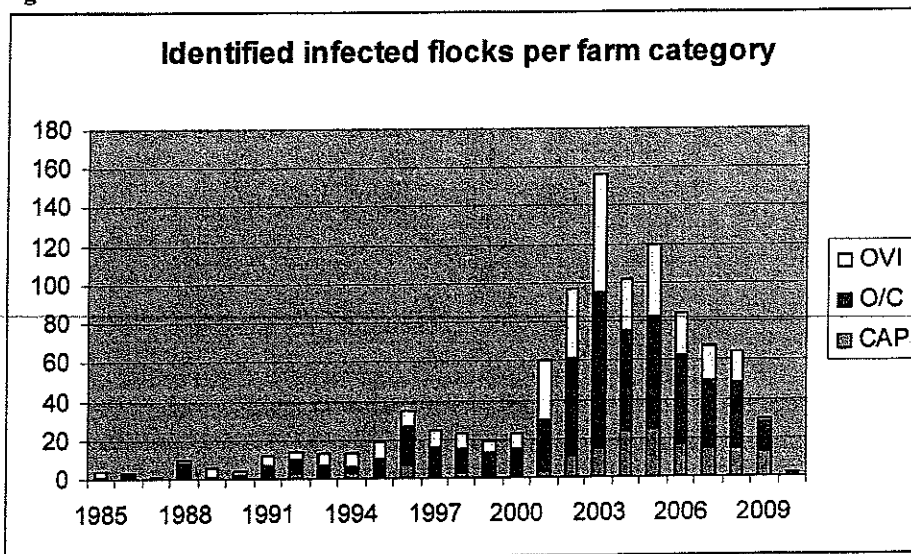
Figure 1



### SHEEP & GOATS

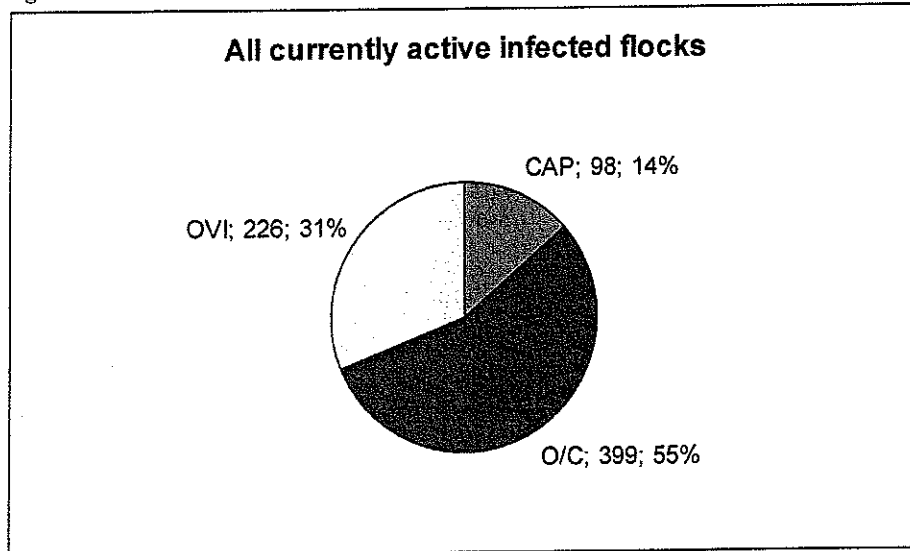
Since 1985, 1006 outbreaks were found. The majority of the outbreaks were in mixed flocks (sheep and goats). The distribution of the new outbreaks per year and farm kind is presented in the Figure below (Figure 2).

Figure 2



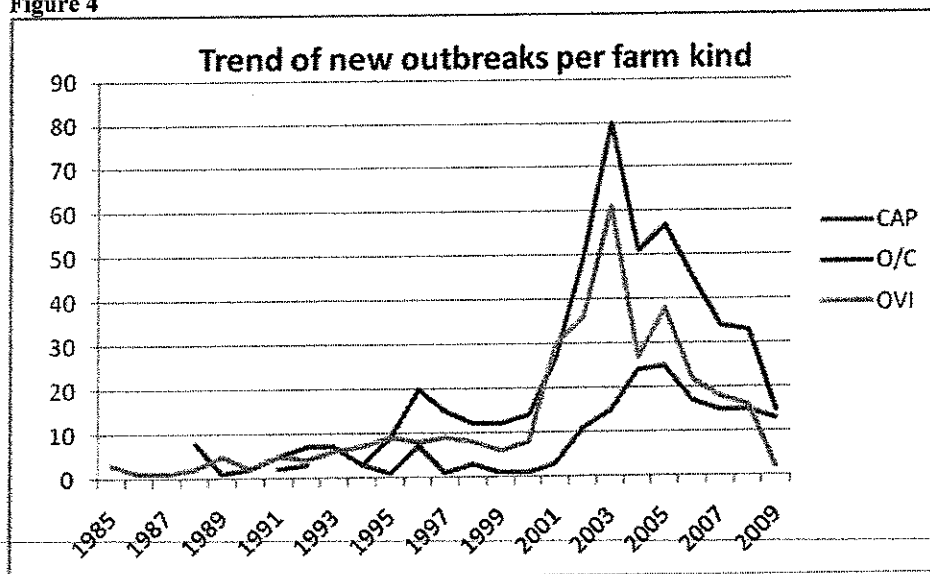
Currently, there are 723 scrapie infected flocks, which are still operating. These represent the 22% of the active sheep and goats flocks. Figure 3, presents the number and the proportion of the active infected flocks according to their farm kind (OVI= only sheep, O/C= Sheep and goats, CAP=only goats).

Figure 3



The number of the new outbreaks especially for OVI flocks and O/C flocks has a declining tendency, most probably related to the improvement of the resistance in sheep as a result of the breeding programme (Figure 4).

Figure 4



Figures 5 and 6 present the situation as regards the confiscated animals. Since 2009, the confiscated animals comprise of animals with suspect clinical signs and of animals that can not be slaughtered for human consumption either because of their PrP-protein genotype or their age. As a result of the breeding 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

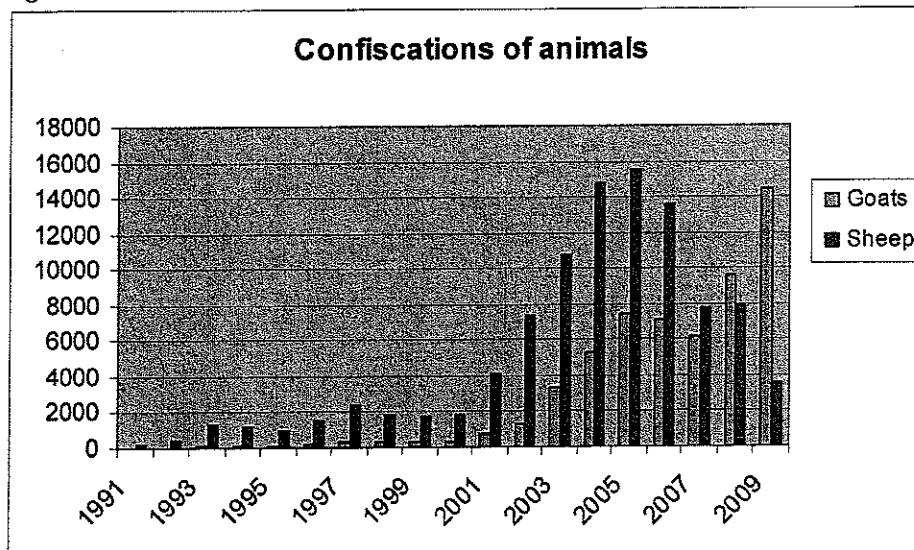
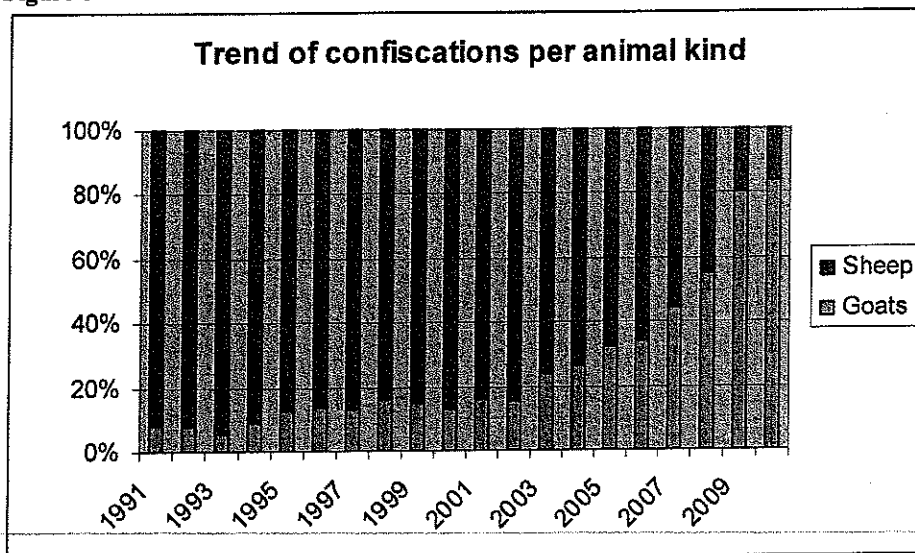


Figure 6



As regards the programme for breeding for resistance in sheep, out of the 625 active infected flocks with sheep, 599 are classified in the Cat II (using only ARR/ARR rams), 2 are classified as Cat I (all animals are ARR/ARR) and 24 are Cat III (also rams other than ARR/ARR are present on the holding 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 sent for slaughter (if bearing 1 ARR allele) or confiscated and culled.

Figure 7

