



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

SANCO/12968/2010

*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**

**Ireland**

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

Ireland

Monitoring Control and Eradication Programme For BSE  
2011

Department of Agriculture, Fisheries and Food Ireland.

### ANNEX III

#### Standard requirements for the submission of programmes of eradication and monitoring of TSEs<sup>1</sup> co-financed by the Community

##### 1. Identification of the programme

Member State: **Ireland**

Disease(s)<sup>2</sup>: **BSE**

Year of implementation: 2011

Reference of this document: **BSE Programme 2011**

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Date sent to the Commission: 27 /04/2010

##### 2. Description of the submitted programme

Ireland's Programme is intended to monitor, control and ultimately eradicate BSE from the national herd. It includes slaughter of cohort and progeny animals and active surveillance of animals over 48 months of age slaughtered for human consumption, fallen casualty and

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<sup>1</sup> Bovine Spongiform Encephalopathy (BSE) and Scrapie.

<sup>2</sup> One document per disease is used unless all measures of the programme on the target population are used for the control and eradication of different diseases.

emergency slaughter animals over 48 months of age, in accordance with Regulation (EC) No. 999/2001 of the European Parliament and the Council as amended

### 3. Epidemiology of the disease

The situation with regard to BSE in Ireland continues to improve. Testing of all slaughter cattle over 48 months of age (including all bovine animals depopulated for BSE reasons), all fallen stock over 48 months of age and all casualty/emergency slaughter cattle over 48 months of age continued in 2010 following changes to EU Reg. 999/2001 in 2008 increasing the BSE surveillance subpopulation age thresholds. In 2009, 9 cases of BSE were confirmed. This compares with 23 cases in 2008, 25 cases in 2007 and represents a 97% reduction in case numbers since the peak of 333 cases in 2002. The majority of cases confirmed in 2009 occurred in animals born prior to the introduction of additional controls in Ireland in 1996 and 1997. Ireland continues to see an upward shift in the age profile of BSE cases. The shift in the age profile of BSE cases as well as the reduction in the prevalence of test positives provides clear evidence that the additional controls introduced in Ireland in 1996 and 1997 have been effective at controlling disease. It is expected that the incidence of disease will continue to decline as older cows leave the system. A small number of cases have occurred in animals born after the introduction of the EU wide feed –ban in 2001, 10 cases to date. Each of these cases has been investigated in detail. No breaches of the control programme have been detected. The continued implementation SRM controls and the feed- ban controls ensure these cases do not pose a risk to human or animal health

### 4. Measures included in the Programme

4.1 *Central Authority*: Department of Agriculture, Fisheries and Food

4.2 *Geographical and Administrative Areas*: Ireland to be treated as a single area.

**4.3 System in Place for the Registration of Holdings:** Each holding containing bovine animals is registered with the Department and is identified by a specific herd number allocated following an inspection by DAFF staff to ensure compliance with certain criteria. Slaughter of BSE cohort and progeny animals currently takes place at a designated slaughterhouse, which is licenced by DAFF. Slaughterhouses and knackeries where rapid testing is carried out are approved by DAFF.

**4.4 System in place for identification of animals:** A very extensive range of measures is now in place to ensure the integrity of the national herd and cattle presented for slaughter. These include an animal traceability system. All calves are tagged at birth with a unique identification number, registered at a central registration database and issued with a passport. This passport records all movements and it accompanies the bovine animal throughout its life. A herd register is also maintained on each holding. This register provides information on all births, purchases, sales and deaths of bovine animals. Information in relation to all births, deaths, and bovine animal movements in Ireland is captured on a central database. This system became fully operational at the beginning of 2000 and was subsequently enhanced by the National Beef Assurance Scheme. At slaughterhouses, strict procedures are in place to verify both the origin and health status of the animals presented for slaughter. These include checks of eartags and documentation (including checks against the Department's database) and ante mortem inspections. In addition each individual animal is assigned a carcass number which can be cross - referenced to its individual tag number and therefore to the farm.

**4.5 Measures in place as regards the notification of the disease:** S.I. 61 of 1989 stipulates that "a person who has in his possession or under his charge an affected of a suspected animal, or the carcass of such an animal, and any veterinary surgeon or other person who, in the course of his duties, examines or inspects any such animal or carcass shall, with all practicable speed, notify the fact to (a) the Secretary, Department of Agriculture, Fisheries and Food or (b) an inspector at a District Veterinary Office of the Department of Agriculture, Fisheries and Food.

#### **4.6 Monitoring:**

##### *4.6.1. Monitoring in Bovine Animals*

	Estimated Number of Tests
Animals referred to in Annex III, Chapter A, Part I, points 2.1, 3 of Regulation (EC) 999/2001 <sup>3</sup>	75,000
Animals referred to in Annex III, Chapter A, Part I, points 2.2, of Regulation (EC) 999/2001	350,000
Animals referred to in Annex III, Chapter A, Part I, points 5 of Regulation (EC) 999/2001 <sup>4</sup> (cohorts, progeny and BSE suspects)	150

## 4.7 Eradication

### 4.7.1. Measures following confirmation of a BSE case:

Following the confirmation of BSE, tracing of cohorts as defined by Regulation 999 and all progeny born to the infected animal after 1996 is carried out. Any live animals identified under this tracing programme are slaughtered at a designated slaughterhouse after the value of the animal has been agreed with the herd owner. All by-products produced by the slaughter of BSE cohorts and progeny animals are treated as Category 1 material and are disposed of in accordance with Regulation 1774/2002 as amended. The number of animals slaughtered under this regime is a function of the number of cases in which the disease is identified and the year of birth of the positive case. It is estimated that the number of animals to be slaughtered under this part of the programme in 2011 should not exceed 50 with most of these requiring rapid testing because they are over 48 months of age.

<sup>3</sup> OJ L 147, 31.5.2001, p. 1, Regulation as last amended by Regulation (EC) No 2245/2003 (OJ L 283, 19.12.2003, p. 28).

<sup>4</sup> OJ L 147, 31.5.2001, p. 1, Regulation as last amended by Regulation (EC) No 2245/2003 (OJ L 283, 19.12.2003, p. 28).

5.1 *Detailed analysis of the costs:*

The costs of this programme will include costs of collection of samples, and the provision of compensation to farmers in respect of the depopulation of herds from this programme. Estimated Costs in 2011 may be broken down roughly as follows:

Activity	Estimated Cost Net of VAT
*Active Surveillance at Factories: 350,000 tests at €5 per test	€1.75m
Active Surveillance – Fallen Animals: 75,000 tests 75,000 x €33.31 per test = €2,498,250 + VAT @21% =€3,022,882.50	€2.498m
Active Surveillance – Monitoring Cohort /Progeny animals: 160 tests at €33.31 per test = €5,329.60+ VAT @21% €6,448.82	€0.005m
Additional costs associated with testing (Equipment, protective clothing transport and collection of samples):	€ 1.3m
Depopulation Compensation (50 animals)	Based on 2009 expenditure of €1.3m. €0.034m (average price of animal/s slaughtered in 2009 =€680
Haulage, Slaughter and other costs associated with Depopulation	€0.217m

<b>Total</b>	<b>€5.81m</b>
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\*The competent authority only pays the EU co-funding amount in respect of over 48 months at factory testing. however, it continues to bear the full cost of the testing of fallen, progeny and cohort animals.

### 5.2. Summary of the costs

Costs related to	Specification	Number of units	Unitary cost in €	Total amount in €	Community funding requested (yes/no)
1. BSE testing <sup>5</sup>					
	Test:				
Factory O48M's	Test: Approved Rapid Test	350,000	€5	€1.75m	Y
Fallen and Casualty Animals	Test: Approved Rapid Test	75,000	€ 33.31	€2.498m	Y
Cohorts and Suspects	Test: Approved Rapid Test	160	€ 33.31	€0.005	Y

4. Compulsory Slaughter					
4.1. Compensation for animals to be killed under the requirements of Annex VII, Point 2 (b) of Regulation (EC) 999/2001		50	€680	€0.034	Y
<b>TOTAL</b>				<b>€4.29m</b>	<b>Y</b>

<sup>5</sup> As referred to in point 4.6.1.



Ireland

Monitoring and Control and Eradication Programme For Scrapie  
2011

**Department of Agriculture, Fisheries and Food, Ireland.**

## **1. Identification of the Programme**

**Submitting Member State:** Ireland

**Year of Implementation:** 2011

**Reference of this Document:** Scrapie Programme 2011

**Contact Person:** Mary Butler, Assistant Principal, Animal Health and Welfare Division, Department of Agriculture, Fisheries and Food, Ireland, email address: mary.butler@agriculture.gov.ie

**Date Sent to Commission:** 27/04/2010

## **2. Description of the Programme**

This is a Programme for the control and eradication of scrapie involving genotyping and partial depopulation of infected sheep flocks and full depopulation of infected goatheards, active surveillance in meat factories, in fallen animal intermediate plants and the continued implementation of a National Genotyping Programme. Control and Eradication is also achieved by passive surveillance on farm

## **3. Description of the Epidemiology of the Disease**

### **3.1 General**

Scrapie has been known internationally for over 200 years. It is present in most sheep and goat producing countries in the world. In common with other TSEs it has a long incubation period. Peak incidence of clinical signs is seen in 3 to 4 year old sheep. There is evidence that significant infection of the tissues of infected animals with the scrapie agent occurs months before clinical signs appear. The course of the clinical disease may be weeks or months. The signs of scrapie are variable and non-specific and can include itchiness (resulting in "scraping" against fences etc.), nervous signs (including lack of co-ordination, head pressing and teeth grinding) and change in temperament. Weight loss may be variable. The disease is non-febrile. Diagnostic methods for pre-clinical cases are still under development. Tests currently proposed for the diagnosis of scrapie in live animals are impractical for large-scale screening and a confirmatory diagnosis can be made on histological examination or immunohistochemistry of tissues after death.

Lambs can be infected by their infected dams around the time of birth with the placenta and foetal fluids being a major source of the agent. It is traditionally recognised that horizontal transmission may occur at this time also via the oral route.

The incubation period of scrapie is determined by the size of the infective dose and genetic make up of the host animal. Sheep of certain genetic types have a shorter incubation period from infection to when clinical signs of the disease become apparent than do others. It has been shown that the single autosomal gene which determines the length of the incubation period in mice is similar to, if not in fact the same as, the gene which codes for the prion protein. It has also been recognised that (normal) PrP gene in sheep is a major factor controlling the development of the clinical signs of scrapie. Variations in the coding areas of the PrP gene in sheep (at locations 136, 154 and 171) determine susceptibility (or "resistance") to the clinical signs of classical scrapie and variations in the coding areas of the PrP gene in sheep (at locations 136, 141, 154 and 171) determine susceptibility (or "resistance") to the clinical signs of atypical scrapie.

### 3.2 The Situation in Ireland

The number of scrapie positive flocks since 1989 is as follows:

Year	Number of (New Flocks)
1989	4
1990	11
1991	8
1992	7
1993	9
1994	8
1995	10
1996	8
1997	13
1998	7
1999	6
2000	14
2001	21
2002	69
2003	37
2004	27
2005	19

2006	39
2007	16
2008	8
2009	12
2010 up to 31/03/10	3

### 3.3 Scrapie 2002 - 2006

The initial implementation of the active surveillance provisions in Council Regulation 999/2001 led to a significant increase in the number of scrapie cases identified in Ireland in 2002. The number of positive flocks identified since 2002 has seen a major reduction in the number with 12 new positive flocks identified during 2009.

The following details the number of test positives cases from 2002 to 2010 year to date:

### Scrapie Test Positives 2002 and up to 31/03/2009

#### Sheep

##### Active Surveillance

Active Surveillance Year	Factory Surveillance No. Tests	No. Positives (cases)	Fallen Animal Surveillance No. Tests	No. Positives (cases)	Total Positives (cases)
2002	54,813	13	5,222	33	46
2003	51,588	10	2,843	17	27
2004	10,686	5	9,632	37	42
2005	10,689	1	10,374	21	22
2006	41,677	9	13,677	36	45
2007	26,970	3	16,184	23	26
2008	11,687	3	10,747	7	10
2009	8,176	2	8,713	10	12
2010 up to 31/03/2010	1,664	0	7,927	2	2

**Passive Surveillance**

2002 Positives (sheep)	2003 Positives (sheep)	2004 Positives (sheep)	2005 Positives (sheep)	2006 Positives (sheep)	2007 Positives (sheep)	2008 Positives (sheep)	2009	2010 up to 31/03/2010
47	16	13	5	8	11	15	11	1

**Goats**

Active Surveillance Year	Factory Surveillance No. Tests	No. Positives (Goats)	Fallen Animal Surveillance No. Tests	No. Positives (Goats)	Total Positives (Goats)
2002	-	-	-	-	-
2003	-	-	-	-	-
2004	-	-	1	0	0
2005	-	-	79	0	0
2006	23	0	163	0	0
2007	0	0	163	0	0
2008	0	0	132	0	0
2009	1	0	63	0	0
2010 up to 31/03/10	5	0	27	0	0

**4. Measures included in the Programme**

**Active Surveillance**

Council Regulation 999/2001 as amended by Regulation (EC) 727/2007 requires the annual testing of slaughter sheep over 18 months of age and fallen sheep over 18 months of age. The Commission proposed a level of testing of 10,000 for healthy slaughtered animals over 18 months and 10,000 for fallen animals in 2007 subject to the requirement that in successive sampling years all officially registered holdings with more than 100 animals and where TSE cases have never been detected are subject to TSE testing. It is anticipated that 10000 healthy slaughtered sheep and 10000 fallen sheep will be tested for TSE's in 2011.

Ireland's surveillance programme for 2011 will involve:

- Targeted active surveillance which will involve rapid testing a sample of animals over 18 months of age which die (fallen animals) or which are slaughtered for human consumption, this will provide additional information in relation to the incidence of scrapie in the general sheep population. Ireland will, at minimum, conduct the number of tests provided for under EU law.
- Discriminatory Western blotting of all index cases testing positive for scrapie and the first two subsequent cases in each restricted flock each year
- Genotyping of individual sheep which have tested positive for scrapie at the four codons;
- Genotyping of animals in scrapie positive flocks at the four codons
- Rapid testing of all animals depopulated from scrapie positive flocks (>18mths)
- TSE testing of fallen animals (>18mths) and cull animals (>18mths) from scrapie positive flocks.
- TSE testing of fallen animals (>18mths) in scrapie monitored flocks

#### **The Test to be Used**

For the programme described above Ireland will use one or more rapid tests approved in accordance with the provisions of commission Regulation EC No. 999/2001 as amended. These will be performed in private laboratories that have been approved by the Central Veterinary Research Laboratory (CVRL) of the DAF. Positive or inconclusive results from these tests will be verified at the CVRL using histopathology and immunohistochemistry and/or immunoblotting (where appropriate).

#### **Taking and Analysing the Samples**

Samples for rapid testing are taken by veterinarians at slaughterhouses, veterinary college, regional veterinary laboratories and knackeries. These samples are analysed using an approved rapid testing accordance with Council Regulation 999/2001 as amended.

#### **Dealing With Infected Flocks**

- Ireland has operated a Scrapie Depopulation Policy from December 2001 to 1<sup>st</sup> October 2003. From that time until 15/4/03, all flocks in which scrapie was confirmed were fully depopulated and the flock owners prohibited from re-stocking with sheep for a period of 3 years after depopulation. For a brief period, from 16/4/03 to

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1/10/03, flocks were fully depopulated, but permitted to re-stock within 30 days after cleansing and disinfection of the holding had been completed.

Since 1<sup>st</sup> October, 2003, Ireland operated a genotyping and partial depopulation policy. Flockowners are permitted to retain Category 1 rams and ewes and Category 2 ewes. Farmers are required to dispose of Category 2 rams, and all Category 3, 4 and 5 breeding animals. Additionally, the competent authority has retained the option to fully depopulate where warranted. Since 15<sup>th</sup> July 2007, restricted flocks are prohibited from re-stocking for 2 years following the removal of the last susceptible animal.

The Department's Central Veterinary Research Laboratory will genotype infected flocks in 2011

**Genotyping/Breeding Programmes:**

- The Department established a National Genotyping Programme, (NGP) which has been rolled out to farmers from 2004. Both pedigree and commercial flocks have access to the Programme and although the focus will be primarily on rams, farmers may also elect to have ewes genotyped. This is a voluntary programme.
- The testing component of the NGP will be delivered by an approved commercial laboratory. The Central Veterinary Research Laboratory has validated practices and procedures in the laboratory (fully automated system). The competent authority issues official NGP certificates to applicants in respect of tests carried out in the approved laboratory for categories 1 to 3 and the system incorporates a database for recording laboratory results and tracking the change of ownership and the movement of genotyped sheep.

**4.1 Designation of the Central Authority charged with supervising and Co-ordinating the Programme**

Department of Agriculture, Fisheries and Food, Kildare Street, Dublin 2, Ireland.

**4.2 Geographical and Administrative Areas**

For the purposes of this Programme, Ireland will be treated as a single geographical and administrative region.

**4.3 System in Place for the Registration of Holdings**

Farms and slaughterhouses which will be involved in the programme are already registered with the Department of Agriculture, Fisheries and Food, and ovine slaughterhouses operate under licence and under the control of that Department.

#### **4.4 System in Place for the identification of Animals**

##### **Sheep**

The National Sheep Identification System came into effect in June 2001 under S.I. 281 of 2001, and involves individual tagging, flock registration and dispatch documents to accompany and record all movements.

A new harmonised EU wide system of sheep identification took effect from 9 July 2005 (Regulation (EC) 21/2004). This system is based on double tagging of sheep, with electronic identification (EID) to be introduced by 31 December 2009\*.

In the mean-time, Ireland sought and was granted a derogation to continue to apply its current sheep identification system. However, regardless of this derogation, certain changes had to be made to bring aspects of our system into line with Regulation 21/2004. In summary these are:

##### **Change to all numeric tagging which took effect from July 2005:**

Flock 'numbers' have been replaced with a flock identifier (designator) consisting of 2 county numbers, a species specific number and 4-digit flock identifier. This is the number that appears on tags, along with a 5-digit individual number. This regulation applies to all sheep **born** after July 2005.

##### **Changes to the flock register and dispatch documents:**

Some minor changes were required by the regulation – e.g. Inclusion of transporter details and destination on the dispatch document. New flock registers and dispatch documents incorporating these changes have been supplied to all flock owners in November 2006.

##### **Date of tagging:**

The tagging regime has now changed i.e. tagging, movement or within 9 months of birth.

##### **Census:**

An annual census of sheep (head count) is required – with the number per flock returned to the Department of Agriculture, Fisheries and Food.



At slaughterhouses, the individual identification number of each animal must be placed on the carcass.

## **Goats**

The National Goat Identification System (NGIS) was introduced in Ireland in 2005 to provide for a national system of goat identification vital for disease control, traceability and consumer assurance. The system is based on:

- Double tagging of all goats by the age of six months or on movement from a holding, whichever comes first
- Use of herd registers to record details of numbers of goats on a holding and details of movements
- Use of dispatch documents to record movements.

## **Tagging**

From the **15<sup>th</sup> of September 2005** all goats moved from a holding must be double tagged (i.e. a tag in each ear) on movement with tags (white) showing the goat designator and an individual number. All movements must be accompanied by a dispatch document.

If goats are purchased from another keeper the herd owner must ensure that the goats have been tagged prior to dispatch and that they receive a dispatch document for their records. The details must be also entered into the herd register. No further tagging is required except in the event of tag loss.

From the **1<sup>st</sup> of December 2005** all goats on a holding over the age of six months must be double tagged. Goats must thereafter be tagged by the age of six months or on movement, whichever comes first.

## **4.5 Measures in Place as regards the Notification of the Disease**

The Disease is compulsorily notifiable under EU and National Legislation. Additionally, results of active surveillance are notified through the Department's administrative system.

## **4.6 Monitoring**

Both active and passive surveillance systems are in place and the disease is compulsorily notifiable.

4.6.2. *Monitoring in Ovine and Caprine animals*

	Estimated Number of tests
Animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) 999/2001	10,000 sheep 200 goats
Animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001	10,000 100 goats
Animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001 Monitoring in infected flocks	3,000
Animals referred to in Annex VII, 8 (d) of Regulation (EC) 999/2001	2,000
Others (specify) Scrapie Monitored Flocks	600

4.6.3. *Genotyping of positive and randomly selected animals*

	Estimated number of tests
Animals referred to in Annex III, Chapter A, Part II, point 8.1 of Regulation (EC) 999/2001 (Scrapie Positive Sheep)	200
Animals referred to in Annex III, Chapter A, Part II, point 8.2 of Regulation (EC) 999/2001 ((Random Sub Sample of Slaughter survey)	650

**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) 999/2001	150

**4.7. Eradication**

*Measures following confirmation of a Scrapie case:*

Description: Restriction and Genotyping of Flock and depopulation of Scrapie Susceptible Animals (Category 2, 3, 4 and 5 rams and category 3, 4 and 5 breeding ewes).

**4.7.1 Summary Table**

	Estimated number
Animals to be killed under the requirements of Annex VII, Point 2 (b) of Regulation (EC) 999/2001 (Slaughter in Positive Flocks)	5,000
Animals to be genotyped under the requirements of Annex VII, Point 2 (b) of Regulation (EC) 999/2001 (Entire Positive Flock)	5,000

## Costs

### 4.8 Detailed analysis of Full costs:

The costs of this Scrapie programme in 2011 are estimated as follows:

Activity	Estimated Cost Excluding VAT
Active Surveillance at Factories: 10,000 tests at €27 per test. (average cost)	€0.275m
Active Surveillance – Fallen Animals: 10,100 tests (10,000 sheep + 100 goats) at €27 per test. (average cost)	€0.273m
Rapid Testing of Infected Flocks and other 3,000 tests at € 27 per test	€0.081m
Genotyping in Scrapie Positive Flocks: 5,000 tests @ €19.25	€ 0.096m
Cost of animals (5,000) under requirements of 999/2001/EC (Slaughter in Positive Flocks)	€0.45m
<b>Total of costs provided for on Standard Form:</b>	<b>€1.175m</b>
Haulage, tagging, certification, sampling and other costs	€0.60m
Laboratory Consumables for Pyrosequencing Equipment	€0.60m
<b>Total Costs</b>	<b>€2.375m</b>

4.8.1 Summary of the costs provided for on Standard Form

Costs Related to	Specification	Number of Units	Unitary Cost in €	Total Amount in €	Community Funding Requested (Yes or No)
2. Scrapie testing <sup>1</sup>					
2.1. Rapid testing of fallen sheep & of healthy slaughtered sheep	Test: Approved Rapid Test	20,300	€27.00	€0.548m	Y
2.2 Discriminatory Testing					
Primary molecular tests	Test: VLA Western Blot	150	€150.00	€0.0225m	Y
3 Genotyping					
3.1. Determination of genotype of animals in the framework of the measures laid down by Regulation 999/2001 <sup>2</sup>	Method: Pyrosequencing at Central Veterinary Research Laboratory	5,000	€19.25	€0.096m	Y
4. Compulsory Slaughter					
4.1. Compensation for animals to be killed under the requirements of Annex VII, Point 2 (b) of Regulation (EC) 999/2001	Cost of Animals Slaughtered in 2009:	802	€84 per ewe "hardship" (adult breeding ewe) + €116 market value	€0.066m	Y
4.7.3 Compensation for animals to be killed under the requirements of a voluntary breeding program.	Compensation for Animals Slaughtered under the Programme in 2009	0	€310 per animal (based on average rate of compensation payable)	0	Y
<b>TOTAL</b>				€0.7325m	Y

<sup>1</sup> As referred in point 4.6.2.

<sup>2</sup> As referred in points 4.6.3 and 4.7.2.2.