An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Scrapie surveillance programme

General Information

Scrapie was first identified in 1732. It is a fatal infectious disease of sheep and goats. Scrapie belongs to a family of diseases known as Transmissible Spongiform Encephalopathies (TSEs), which also includes BSE in cattle and CJD in humans. TSEs are caused by infectious agents caused prions. There are two forms of scrapie- classical scrapie and atypical scrapie. Classical scrapie is naturally transmissible between sheep and goats. It is believed that atypical scrapie does not transmit from one affected animal to another.

Scrapie causes neurological signs and weight loss in affected sheep, and so it can cause substantial economic losses at farm level. During the BSE crisis in the 1990s, when it became clear that BSE had passed from cattle to humans, scrapie came into focus as it is also a TSE. But despite extensive research, there is no evidence that scrapie prions have ever transmitted to humans or caused disease in humans.

Surveillance

TSE surveillance in sheep and goats in Ireland is governed by Regulation (EC) 999/2001, also known as the TSE Regulation. The Department of Agriculture, Food and the Marine (DAFM) is the competent authority responsible for carrying out the surveillance programme.

Active surveillance

As per Annex III of the TSE Regulation, 10,000 ovine animals slaughtered for human consumption are sampled at slaughter plants and tested each year. In the case of animals which die or are killed but which are not slaughtered for human consumption (fallen animals), 10,000 sheep and up to 100 goats each year are sampled and tested. The sampling of fallen animals takes place at knackeries (fallen animal collection centres). The reason for the relatively small number of caprine tests required by the TSE Regulation is that Ireland’s goat population is less than 40,000.

Last updated: 29 January 2021

TSE testing is carried out in accordance with laboratory methods laid down in Annex X, Chapter C, point 3.2 (b) of Regulation 999/2001, that is, samples taken from the brain are examined by a rapid test which detects all known strains of TSE. If the rapid test is positive or inconclusive then a confirmatory diagnosis is made on histological examination, immunohistochemistry or Western blotting of tissues after death.

Passive surveillance:

Since 1992 farmers, veterinary practitioners or other citizens are legally obliged to report sheep or goats suspected of being infected with scrapie to the veterinary authorities.
If an animal with suspicious clinical signs is reported, an official veterinarian from DAFM visits the holding or site where the suspect is located. A veterinary assessment is carried out. If a TSE cannot be ruled out, arrangements are made for the euthanasia and disposal (through category 1 rendering) of the carcase of the affected animal. The head is retained and dispatched to the local Regional Veterinary Laboratory. Here the brain is removed and sent to the National Reference Laboratory for confirmatory testing.

Scrapie: Control and Eradication

If a TSE is suspected in an ovine or caprine animal (generally either due to a positive rapid test result or due to a report of suspicious clinical signs), the flock/herd is placed under restriction pending the results of the confirmatory test. What happens next depends on the strain of scrapie detected in the confirmatory test.

- In flocks where classical scrapie is confirmed, Ireland implements point 2.2.2 of Chapter B of Annex VII of the TSE Regulation. This involves the genotype testing of the entire flock, followed by the killing and destruction of scrapie susceptible animals. All animals over 18 months killed for destruction are TSE rapid tested. Ireland has not recorded classical scrapie in a goat herd to date. Intensified TSE monitoring, with testing of all fallen and slaughtered animals aged over 18 months old, is then carried out.

- If atypical scrapie is confirmed an intensified TSE monitoring programme is put in place whereby all animals aged over 18 months slaughtered for human consumption or which have died or been killed are tested for TSEs for a period of 2 years.

Results from the TSE active surveillance programme in small ruminants, 2014-2019

Year	No of Samples	No Classical cases	No Atypical cases	Total cases	Total cases as percentage of total sampled
2014	21,760	19	7	26	**0.119%**
2015	22,179	1	7	8	**0.036%**
2016	21,565	1	1	2	**0.009%**
2017	21,491	11 *	1	12*	**0.055%**
2018	22,045	1	8	9	**0.041%**
2019	22,089	0	6	6	**0.027%**
2020	21,688	0	1	1	**0.00005%**

***Ten of the eleven classical cases detected in 2017 were from the same flock**

For some further information on scrapie in Ireland in the past few decades please see:

Scrapie statistics, Ireland, 2001-2018

Last updated: 29 January 2021