

*This Frequently Asked Questions document has been prepared collaboratively by Ontario Goat, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Canadian Food Inspection Agency (CFIA) to assist Ontario goat producers and provide a better understanding of scrapie in goats.*

### **What is scrapie?**

Scrapie is a fatal disease that affects the brain and central nervous system of sheep and goats. It is not a new disease and was first reported in sheep over 250 years ago. Scrapie belongs in the family of diseases known as transmissible spongiform encephalopathies (TSE). These diseases are associated with the presence of abnormal prions. Prions are normal proteins in an animal that change their structure when they come in contact with abnormal infectious prions.

### **Is scrapie a risk to human health?**

According to Health Canada, there is no known link between scrapie and human health. The disease is not spread to humans by consuming goat milk, cheese or meat.

### **How is scrapie transmitted and spread?**

Scrapie is spread most commonly from an infected female to her offspring at birth, or other animals exposed to the birthing environment, through infectious prions in the placenta and birthing fluids. As well, scrapie prions have been found in the manure, saliva and milk of clinically and sub-clinically infected animals, so transmission may also occur by exposure to these routes. This is an animal to animal problem.

### **Isn't scrapie just a sheep issue?**

Scrapie can affect both sheep and goats in a similar manner. Until recently, most cases of scrapie confirmed in Canada were in sheep flocks. The previous cases of scrapie in goats (1976, 2007) were connected to a sheep source because the goats and sheep were co-mingled.

### **What are the clinical signs of scrapie?**

Scrapie is a disease that affects the central nervous system of goats and sheep, and develops slowly. Clinical signs are only seen in adult animals, typically between two and five years of age, and in some animals it can be much older. However, once an animal appears ill, it will typically die within months. In Canada, the disease frequently presents itself as thin, weak/wasting goats even with a good appetite. Other signs may include trembling, excitability and lack of coordination.

### **How is scrapie diagnosed?**

For goats, scrapie can only be positively diagnosed after death by examination of the brain tissue.

### **Is there a live animal test for scrapie for goats?**

Biopsies of lymphoid tissue from live goats may be used as a herd screening tool to look for the presence of scrapie infection. However, a negative lymphoid biopsy does not rule out the possibility that a particular animal has scrapie. The only way to definitively test goats for scrapie is to take samples of the brain.

**What is a genotype?**

A genotype is the genetic make-up of an individual. It is comprised of genes that are inherited from the parents for a specific trait.

**What is genotype testing?**

Genotype testing involves assessing the differences in the genotypes of individuals. In goats or sheep, this testing can be done by first taking a blood sample or nasal swab from an individual and then performing laboratory tests to determine each individual's DNA sequence. In the case of goats, a genotype test is used to assess the prion protein (PrP) gene to determine the genetic susceptibility or resistance to scrapie. A genotype test will NOT tell us if an individual has scrapie disease.

**How long will it be before a genotype test is used in an outbreak?**

A connection between specific genetics and related scrapie resistance has been identified in goats based on samples from the two scrapie positive herds in Ontario. However, there is no international consensus at this time as to what genotypes confer resistance as other genetic markers have been identified in goat scrapie cases from other countries. Any genotype test must be validated for the specific scrapie genetics found in goats in Canada. While research is ongoing, it is uncertain as to if or when this test could be accepted for use by the CFIA. Use of genotype testing in scrapie disease control programs is a relatively recent advance and was only approved by the CFIA for use in sheep in Canada in 2004.

**What is the scrapie disease control protocol that CFIA follows?**

When a scrapie-positive test result is confirmed by the CFIA, immediate science-based internationally recognized "stamping out" disease control actions are initiated and normally include some or all of the following:

- Strict quarantine and animal movement controls to prevent spread;
- Investigation of potentially infected or high-risk animals that could potentially spread the disease to new premises and investigation of all potential source farms;
- Humane destruction and disposal of all infected and at-risk animals with compensation;
- Strict cleaning and disinfection of the infected premises; and
- Follow-up active surveillance requirement.

**What happens if my herd is diagnosed with scrapie?**

Please refer to the following website for the info sheet "*Scrapie- what to expect if your animals may be infected*" (also available at your local CFIA office).

<http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/scrapie/if-your-animals-may-be-infected/eng/1355963623752/1355963789207>

**How is scrapie treated?**

There is no treatment or vaccine currently available worldwide. The disease does not cause an immune response in the infected animal, therefore vaccination is not an option.

**Is there compensation available from the government?**

Under the *Health of Animals Act*, the CFIA may compensate goat producers for animals ordered destroyed during disease response situations. Compensation is not provided for the cleaning and disinfection of farm premises. More details about compensation can be found online or at your local CFIA office:

<http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/compensation/eng/1313712524829/1313712773700>

### **What can I do to protect my farm and animals?**

It is important that you record all animals coming onto, born and leaving the farm. Records should include the source of the animals, when they were purchased, animal identification (tattoo, ear tag/neck chain/leg band number), breed, age, and birth dates. Only purchase animals from herds with a known health status equal to or greater than your own. It is also important that you work closely with your herd veterinarian to investigate animal health concerns. Best management practices should be implemented for:

- Prompt isolation of sick animals;
- Separation of females giving birth;
- Increased cleanliness of the maternity area; and
- Disinfection of equipment between animals.

While scrapie is a concern today, goat producers need to be aware of other production limiting diseases that will affect their herd and implement good biosecurity practices. *The National Farm-Level Biosecurity Standard for the Goat Industry* is a good source of information. Copies of this resource have been previously distributed to Ontario goat farmers by Ontario Goat and can also be found at:

<http://www.inspection.gc.ca/animals/terrestrial-animals/biosecurity/standards-and-principles/goat-industry/eng/1367131154680/1367131213133>

### **Why is scrapie considered a reportable disease?**

In Canada, scrapie has been a federally reportable disease since 1945 and, under the *Health of Animals Act*, all owners and veterinarians must notify the CFIA of suspected cases of scrapie. In turn, the CFIA is responsible for notifying the World Organization for Animal Health (OIE) of all cases of scrapie.

As scrapie is an OIE listed disease, Canada has international and trade obligations to respond to scrapie-infected goat herds and sheep flocks. To remain competitive and ensure the long-term sustainability of the Canadian small ruminant industry, the CFIA instituted a national scrapie eradication program with industry support in 2005. This serves to protect the health of the national sheep flock and goat herd, thereby reducing the economic and animal health impacts of scrapie.

### **As a producer involved with a reportable disease investigation, how does CFIA protect my personal information?**

As directed by the *Privacy Act* and other federal statutes, the CFIA is required to protect private information collected. Any information provided by you during a disease response situation is treated as confidential, unless otherwise indicated.

Ontario Goat also respects the privacy of its members during disease investigations and will respect the protocols as set out by the *Privacy Act*. Ontario Goat is never made aware, by CFIA or OMAFRA, of the names or locations of the farms as part of the disease investigation, unless the farmer notifies Ontario Goat directly.

### **Why don't we know the county in which the scrapie infected farms are located like other disease reports (eg. PEDv)?**

Scrapie is a federally reportable disease versus an emerging infectious disease like Porcine Epidemic Diarrhea virus (PEDv). While scrapie is an infectious disease, it is not highly contagious like PEDv or

spread through the same pathways as PEDv. PEDv is not a federally reportable disease and was managed by OMAFRA with the swine industry.

### **How many goat farms have had scrapie in Ontario?**

At present (February 2016), two commercial goat operations have been confirmed with scrapie disease in their herds. There have also been a number of lifestyle farms with goats confirmed with scrapie. As a result of the positive scrapie tests, the CFIA has conducted an extensive investigation looking at animals moving both in and out of the infected farms.

### **What is Ontario Goat doing to help goat farmers?**

As a first step towards potentially eliminating scrapie susceptibility in the provincial goat herd, Ontario Goat has partnered with the Centre of Excellence for Goat Research & Innovation and Trent University to test goat breeds and herds for genotypes that may indicate resistance or susceptibility to scrapie disease. This new project will build on findings from a previous scrapie disease study looking at infected and unaffected goats involved in the two recent Ontario scrapie disease outbreaks.

### **Why doesn't the goat industry have mandatory animal identification and traceability?**

The CFIA is currently proposing enhanced regulations for the livestock industry that will include the goat sector and will address animal identification, animal movement and traceability. There currently is not an approved animal identification protocol for use in the goat industry. Ontario Goat continues to work with CFIA to ensure that the needs of the Ontario goat industry are addressed in a proactive, cost effective manner.

### **FOR MORE INFORMATION:**

#### **Ontario Goat**

[info@livestockalliance.ca](mailto:info@livestockalliance.ca)

1-866-311-6422

[www.ontariogoat.ca](http://www.ontariogoat.ca)

#### **Canadian Food Inspection Agency**

[www.inspection.gc.ca](http://www.inspection.gc.ca)

1-800-442-2342

Or contact your local CFIA district office

#### **Scrapie Canada**

[www.scrapiecanada.ca](http://www.scrapiecanada.ca)

1-866-534-1302