Guidance for *Trichinella* Testing In Feral Wild Boar

Who is this guidance booklet for?

This leaflet provides guidance for hunters on *Trichinella* testing procedures for feral wild boar carcasses. The information only covers *Trichinella* in feral wild boar shot by hunters for private consumption or for sale in local retail shops.

Introduction

The current EU Food Hygiene Regulations (EC No. 852/2004, EC No. 853/2004 and EC No. 854/2004) came into effect on 1st January 2006. Regulation (EC) No. 854/2004 lays down specific rules for the organisation of official controls on products of animal origin intended for human consumption. It requires that the carcasses of swine and other species susceptible to trichinosis, including feral wild boar, are to be examined for *Trichinella*.

What is *Trichinosis*?

Trichinosis is a disease caused by the larvae, 'trichinae', of a small nematode worm (*Trichinella spiralis*), which can affect many species including humans. People can become infected by eating raw, undercooked or processed meat from pigs, wild boar, horses or game that contain the *trichinae*.

The infection commonly causes symptoms such as diarrhoea, abdominal cramps and malaise. It can progress, causing fever, muscle pain and headaches and in severe cases may affect the vital organs possibly leading to meningitis, pneumonia or even death.

How do animals become infected?

Except in severe cases, animals infected with *Trichinella* generally show no outward signs of infection.

Like humans, animals can also become infected when they ingest meat containing the *trichinae*. In the case of food species, such as pigs, the potential sources of infection are the consumption of dead infected animals, either directly or from contaminated commercial animal feeds. A number of wildlife species can also carry *Trichinella* including foxes, rodents and wild boar. Wildlife species can become infected through the consumption of other wildlife or by scavenging through dustbins that contain infected meat.

Why do we test for *Trichinella*?

Feral wild boar that have been shot by hunters in the UK and are supplied direct to the consumers or to local retail establishments should be tested. Although *trichinae* can be killed by thoroughly cooking meat products it is essential we take steps to limit the risk

of infected meat reaching the consumer. Testing will help protect the public from coming into contact with infected meat and provide national surveillance data on the prevalence of any possible infection in wildlife in the UK. The more samples of wildlife that test negative the lower the prevalence of infection that can be claimed.

There have been no confirmed human cases of trichinosis from meat produced in the UK since 1969. The last reported case in a domestic pig from the UK was in 1979, however it was found in a fox in 2009. Both of these cases occurred in Northern Ireland. The disease however is widespread in Europe and is of such a concern that it has been recommended that there be a tightening of controls to be applied equally across the EU.

Although the population of wild boar in the UK is small it is not insignificant. As well as the risk from consumption of infected wild boar meat there is a risk due to the interaction between these animals and domestic pigs which includes reported cases of interbreeding between domestic sows and wild boar. Infection can only be contracted by consumption of undercooked infected meat. As wild boar are potential sources of infection they must be brought into the *Trichinella* monitoring system.

How do we test for *Trichinella*?

The test involves taking a sample of muscle tissue which is sent to a laboratory to be broken down (digestion technique) and examined for the presence of the *trichinae*. Please note that testing must be carried out by a diagnostic laboratory able to perform the approved direct digest method. The use of a trichinoscope to examine meat samples is no longer permitted by the legislation.

Figure 1 *Trichinae* released from muscle by digestion

Samples

The muscle sample should ideally be taken from the pillar of the diaphragm, cutting along the thick meaty part as close to the ribs as possible (see Figure 2 for diagram). If this is not possible, muscle should be taken from the foreleg.

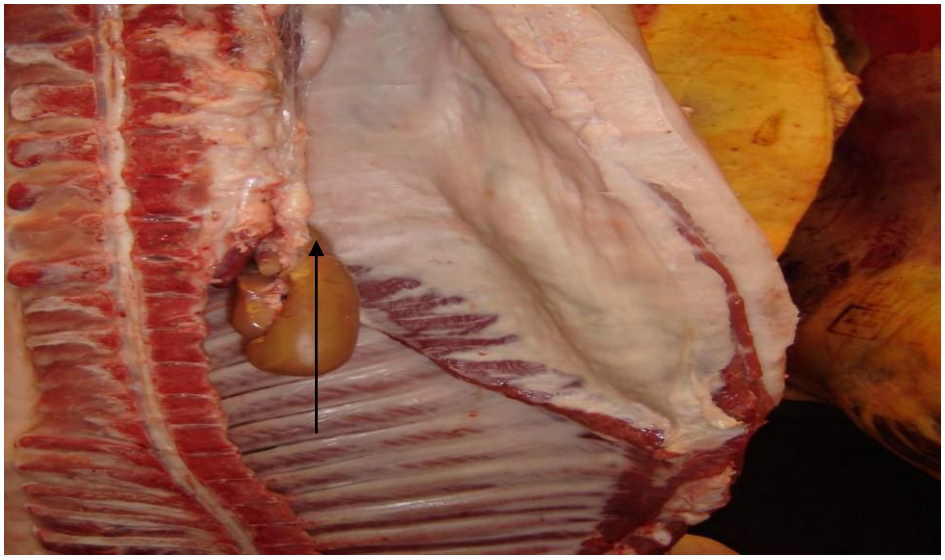

Figure 2 Diaphragm

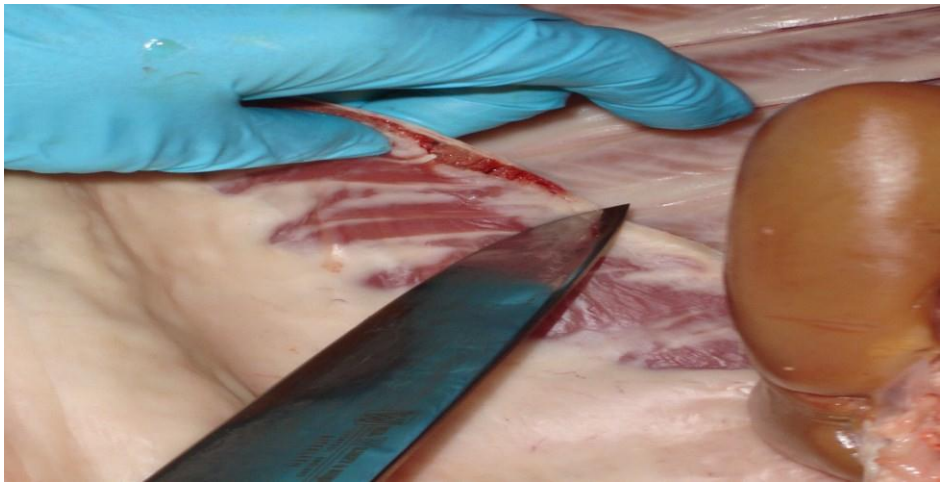

Figure 3 Cutting a sample

A muscle sample of at least 10g, equivalent to a piece of diaphragm meat at least 5 cm (2 ins) cube, should be cut from the carcase of each animal as soon as possible after death. The sample should be free of fat and other tissue. See Figure 4 for guidance on the size of the muscle sample.

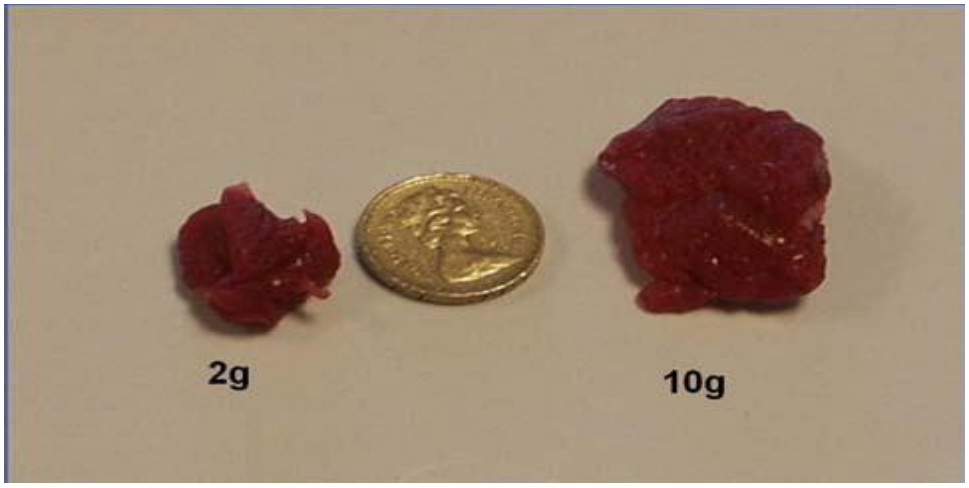

Figure 4: Guide on the size of muscle required for the sample.

Storage and Transport

Once the muscle sample has been taken from the carcase it should be placed in a container and sent for testing as soon as possible. **The sample must not be frozen.**

Figure 5: Container in which samples should be placed

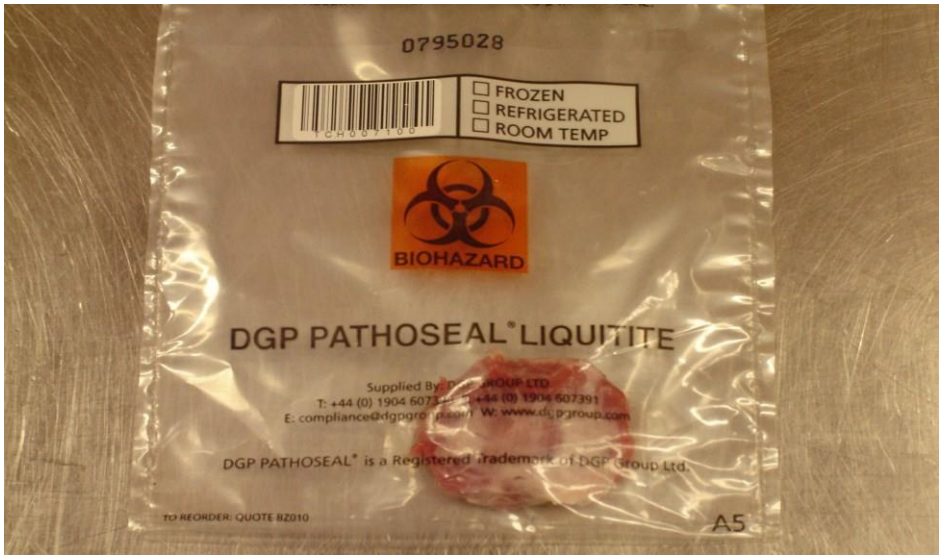

Figure 6: Sample placed in the container

Containers for storing and transporting samples together with addressed, freepost envelopes for posting samples can be ordered prior to hunting free of charge from the Animal and Plant Health Agency (APHA):

Tel: 01904 462000

Email: jane.learmount@apha.gsi.gov.uk or valerie.boughtflower@apha.gsi.gov.uk

If required, samples can be stored in the refrigerator at approximately 4ºC for a few days and sent by next day delivery at room temperature. **THE SAMPLE MUST NOT BE FROZEN** as this can destroy the *trichinae*.

Submission form

Each sample sent for testing must be accompanied by a submission form (Appendix 1). On this form you will need to enter your unique number, which is also your order number, and complete details about each wild boar shot. The information contained in the submission form will remain confidential and will only be used for surveillance purposes.

The submission form may be obtained from the Agency by contacting the above number or email address.

Testing time

Samples will be tested within 48 hours of arrival at the laboratory and results sent out on the day of the test. The submission form allows you to state your preferred communication method for the test results.

What happens if *Trichinella* is found?

If a sample tests positive for *Trichinella* the laboratory will inform Food Standards Scotland and the hunter. The carcase will be retested to confirm the presence of the parasite. If a positive result is confirmed on the second test the carcase will be traced and rejected as unfit for human consumption.

Summary of testing procedure

- **Cut 10g sample of muscle from the diaphragm of the carcase.**
- **Store, if necessary, in container at 4ºC.**
- **Complete submission form.**
- **Send to laboratory.**
- **Await results.**
- **Keep carcase out of the food chain until negative result received.**

Animal &
Plant Health
Agency

Lab ref

Trichinella Testing Submission Form for Feral/Wild Boar

Laboratory of Destination:
APHA Parasitology Group (Wildlife)
National Reference Laboratory: Trichinella &Echinococcus,
NAFIC Site
Sand Hutton, York, YO41 1LZ

Contact:
Jane Learmount

Tel: 02080 262433

Email:jane.learmount@apha.gsi.gov.uk

FOR COMPLETION BY HUNTER SUBMITTING THE SAMPLES	
Unique identification number:	
Name: **Address:** **Telephone:** **Email:**	
Preferred method for communication of results (circle): **Tel / Email** *Please provide number/email if different to above*	
Location of kill:	**Map reference** (if available):
Date of kill:	**Sex of Boar** (circle): **M / F**
Age of Boar (circle): • Up to 6 months • 6-12 months • 1-2 years • 2-3 years • 3+ years Adult • Unsure	**Sample Type** (circle): • **Pillar of Diaphragm** • **Other** (please state) ……
No. samples pooled:	**Date sent to Lab:**
Signature:	

FOR COMPLETION AT LABORATORY	
DATE ARRIVED:	**TEST RESULT** (circle): • *Negative* • *Suspect Positive (Re-test Required)* • *Confirmed Positive after Re-test* • *Confirmed Negative after Re-test* • *Inadequate Sample (Re-test Required)*
DATE TESTED:	
SIGNATURE:	

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