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 1\textsuperscript{st} 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](image)

*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.
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
 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 Food Standards Agency:

**Tel:** 01284 724499

**Email:** paul.harris@apha.gsi.gov.uk

If required, samples can be stored in the refrigerator at approximately 4°C 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 the Food Standards Agency 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.
Appendix 1 *Trichinella* Testing Submission Form for Feral Wild Boar

**Laboratory of Destination:**
APHA Veterinary Investigation Centre  
Trichinella NRL,  
Surveillance & Laboratory Services Department  
Rougham Hill, Bury St Edmunds, Suffolk, IP332RX

**Contact:**
Paul Harris  
Tel: 01284 724499  
Fax: 01284 724500  
Email:paul.harris@apha.gsi.gov.uk

### FOR COMPLETION BY HUNTER SUBMITTING THE SAMPLES

<table>
<thead>
<tr>
<th>Unique identification number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter detail: Name:</td>
</tr>
<tr>
<td>Address:</td>
</tr>
<tr>
<td>Telephone (incl. dialling code)</td>
</tr>
</tbody>
</table>

### Number of carcases sampled and pooled

### Date of despatch to laboratory

### Method for communication of results

*Tel. number for receipt of results (inc. dialling code)*

*Email address for receipt of results*

### Animal: Place of killing: Date of killing: Sex: M F

### Age: (tick)
- Wild pig (up to 6 months)
- 6 - 12 month boar:
- 1 - 2 year boar:
- Young wild boar 2 to 3 yrs
- Adult 3 years and more
- Indeterminate:

**Type of the sample**
- Pillar of diaphragm
- Other

**Signature**

### FOR COMPLETION AT LABORATORY

**Date Tested:**

**Test Result**
- Negative
- Suspect Positive (Re-test Required)
- Confirmed Positive after Re-test
- Confirmed Negative after Re-test
- Inadequate Sample (Re-test Required)

**Signature**

**Date**
To order further copies of this publication contact Animal & Plant Health Agency:

Tel: 01284 724499
Fax: 01284 724500
Email: paul.harris@apha.gsi.gov.uk

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