Scotland's MOORLAND FORUM
Principles of Moorland Management

Worm Control in Red Grouse
Guidance

Through the Principles of Moorland Management project, Scotland's Moorland Forum is preparing a range of guidance that provides practitioners, working in upland and moorland areas, with a source of information that reflects good practice and establishes a standard for accepted management techniques.

Information that is available elsewhere has not been duplicated, but a reference to it is included.

All the documents should be seen as representing evolving guidance. The aim is to review the documents at least annually so that they reflect the latest information.

Practices in this guidance, which are backed up by legislation and/or regulation, contain the word '**MUST**' in bold, letters. Failure to adopt these practices could lead to prosecution.

Parts of the guidance contain the word '**should**' in bold, lowercase letters. The actions identified in this way are not covered by legislation but land managers are expected to follow these parts of the guidance, as they represent sound, acceptable practices, which aim to achieve sustainable management of the hare population.

This Worm Control in Red Grouse guidance consists of:

- This Guidance - an overview of the issues that practitioners need to be aware of; and
- Supplementary Information – additional background information in a separate document about worm control options.

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Acknowledgements
The guidance has been prepared for Scotland's Moorland Forum by representatives of: the Game & Wildlife Conservation Trust, the Scottish Gamekeepers' Association, Scottish Land & Estates and Scottish Natural Heritage; it has been reviewed by the Project Steering Group.

The member organisations of Scotland's Moorland Forum are listed in Supplementary Information No. 1.

Revision Table

Date	Details
19 Apr 18	Para 1.3 amended – date for start of withdrawal period included
19 Jan 19	Supp Info No.1 – JMT added to list of MF members Moorland Forum personnel details changed

1 The Law and Worm Control in Red grouse

1.1 The Wildlife & Natural Environment (Scotland) Act 2011 inserted Section 3C into the Wildlife & Countryside Act 1981, which allows Red grouse to be caught at night for the purpose of preventing the spread of disease, providing there is an intention to release birds within 12 hours of capture.

1.2 The annual Open General Licence is available on the SNH website. This is essential reading for anyone seeking to catch grouse for treatment. The link to the 2018 guidance is in the Further Information section.

1.3 The Veterinary Medicines Regulations 2013 require a 28-day withdrawal period for the medicated grit before grouse are shot to avoid the wormer treatment being passed into the human food chain. Therefore, if grouse shooting is planned from the beginning of the season, medicated grit **should** be withdrawn before 16th July.

1.4 On some designated sites, making medicated grit available to grouse may be an Operation Requiring Consent (ORC). On designated sites practitioners **MUST** check whether consent is required and if held, it is valid.

1.5 The local SNH area office will be able to help (see Further Information No. 1).

INTRODUCTION

2 Aim of the Guidance

2.1 This guidance aims to provide the owners and managers of land with a population of Red grouse with:

2.1.1 Sufficient understanding of the issues to make an informed decision about whether or not to implement a worm control programme,

2.1.2 Sufficient knowledge to carry out disease control in a legal, responsible and sustainable manner, and

2.1.3 Information about the different techniques that can be used.

3 Background

3.1 Red grouse is a wild bird and intervention through medication **should** only be considered after careful consideration of the risks, costs and potential benefits.

3.2 *Trichostrongylus tenuis*, a parasitic threadworm, lives in the gut of red grouse. Large burdens of this worm can trigger a disease called 'Strongylosis', which reduces Red grouse breeding success and survival rates.

3.3 Reducing worm burdens improves body condition and breeding success. It also reduces scent emission, making the birds less vulnerable to mammalian predators when breeding.

3.4 Three forms of worm control are available:

3.4.1 Managing grouse numbers:

- Reduces densities and thus the transmission of worms; this was the traditional approach.

3.4.2 Direct dosing:

- Catching grouse by hand and treating them with an oral drench wormer.

3.4.3 'Medicated' quartz grit

- This is provided to free living grouse. The grit has been prepared with a digestible coating into which a wormer drug is impregnated.

4 Deciding whether or not to treat Red grouse.

4.1 The limited success of managing grouse numbers to control worms has led to greater reliance being placed on the use of medication.

4.2 Before using medication, practitioners **should** consider that:

4.2.1 Worm resistance to chemical wormers (anthelmintics) may occur if used inappropriately.

4.2.2 Anthlemintics may make their way into the environment, as sometimes found following the treatment of parasites in sheep and cattle.

4.3 Before any sort of medicated intervention to control worm burdens, the intensity of the infection **should** be established, and treatment options **should** be discussed with the prescribing Vet.

4.4 Medicated grit **should** only be used if worm burdens are at a level that is likely to affect grouse health and breeding success.

5 Assessing Worm Burdens

5.1 Practitioners **should** conduct annual strongyle worm counts in autumn, and/or worm egg counts in spring, to establish if medicated grit is required.

5.1.1 Parasitic worms can be counted from a sample of shot, adult grouse, preferably in August, and again at the end of the shooting season / last shoot day.

5.1.2 Strongyle worm eggs are passed in the caecal droppings produced every night at roost (see Further Information No. 5). Fresh caecal droppings can be processed and the numbers of eggs assayed to allow an approximation of the worm burden in the bird.

5.2 Average counts (based on geometric means) of more than 1,000 worms per bird from the autumn worm counts can be the threshold above which the use of medicated grit is considered.

FURTHER INFORMATION

1. SNH Area Offices
   https://www.nature.scot/about-snh/contact-us/area-offices

2. Best Practice: Use of Medicated Grit
   http://www.gwct.org.uk/advisory/guides/medicated-grit-best-practice/

3. Policy: Sustaining Scotland's Moorlands
   http://www.gwct.org.uk/scotland/policy/sustaining-scotlands-moorland/

4. Open General Licence 05/2018: To take red grouse using certain methods in order to administer medication or collect samples: https://goo.gl/oe7csw. This licence is renewed in December each year for the following year and is available from the SNH website.

5. For more information about *Trichostrongylus tenuis* see:
   https://en.wikipedia.org/wiki/Trichostrongylus_tenuis

6. Photo of caecal droppings:
   http://www.geograph.org.uk/photo/1083605

Worm Control Guidance - Supplementary Information No. 1
Members of Scotland's Moorland Forum

Association of Deer Management Groups
British Association for Shooting and Conservation
British Deer Society
British Trust for Ornithology (Scotland)
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