

## Worm Control in Grouse: managing parasitic worm infection in Red Grouse

Key **1** MUST **2** SHOULD



### Aim

- This document sets out the background to parasitic threadworm infections in red grouse.
- Describes how infection can be monitored and managed through the prescribed use of medicated grit.
- Identifies the information required by a vet to assess the need for any prescription.
- Provides advice on the management of the medicated product

### Introduction

The presence of the parasitic strongyle threadworm affecting red grouse has been recognised for more than 100 years. Research started in the 1980s by GWCT established that infection with strongyle worms can cause 4-to-6 year fluctuations in grouse numbers. Subsequent research focused on ways to reduce the severity and frequency of these cyclical population crashes to help stabilise grouse numbers. Reducing parasites helps both to improve body condition and breeding success in adult grouse and reduce their scent emission, making the birds less vulnerable to mammalian predators when breeding. This increases the likelihood of a sustainable surplus of red grouse for shooting and long-term investment in all aspects of moorland management.

Reducing the cyclical impacts of infection can be assisted by an indirect method of strongyle control using medicated grit. Red grouse naturally consume grit, which they store in their gizzard, to aid the digestion of fibrous heather shoots. Grit can occur naturally on moors but is also provided at gritting stations by gamekeepers. To kill strongyle worms, quartz grit is covered with a stearate coating impregnated with an anthelmintic drug (Flubendazole - commonly used for control of parasites in livestock and pets). This is known as 'medicated grit'.

### Assessing Red Grouse for infection

It is important to know what levels of worms are present in grouse before any parasite management is considered.

This evidence can be assessed in two ways:

1. Where only non-medicated grit is being used, strongyle worms are counted from a sample of 10 adult and 10 young grouse randomly selected from those shot, preferably in August and again at the end of the shooting season. Where there is a history of medicated grit use, a sample of 20 adult grouse only are analysed.  
  
The spread of individual worm values across the measured sample, guided by the geometric average, will help steer decisions on whether medicated grit is required to control worm parasites. Importantly, these count results should be provided to your vet when seeking a medicated grit prescription.
2. If late-autumn worm counts are not sufficiently high for a veterinary prescription, further monitoring may still be appropriate. This should be done in late winter, but this time through counting worm eggs in carefully and freshly gathered grouse caecal droppings. From the number of eggs counted in the sample, the approximate worm burden can be calculated. By using egg counts to monitor parasite fluctuations, more informed decisions can be made by your vet over the necessity of a medicated grit prescription.

Over-use of medicated grit may increase resistance to the anthelmintic amongst strongyle worms. If worm burdens are low in the autumn, continued parasite monitoring through caecal egg counts in late-winter is recommended. To help vets decide on

whether dispensing a prescription is necessary, information should not be based solely on autumn worm burdens. Grouse densities, age structure, recent weather, moor location and presence of tick should all be taken into consideration. Where worm burdens are consistently low, a vet will not issue a prescription for the use of medicated grit without sufficient evidence of a high worm count.

## Key information you need to supply to a vet for assessment of parasitic control requirements

Medicated grit is **only** available under veterinary prescription.

**Evidence** of a high strongyle worm burden, supported by other relevant information, is **required** by a veterinarian before a prescription can be dispensed.

To comply with the law, medicated grit containing the drug **must** be withdrawn from grouse 28 days before grouse are harvested and consumed as food.

### Evidence of need:

- Worm count (number of samples, mean count), sample date(s), age of birds
- Egg count (number of samples, mean count), sample date(s), age of birds
- Counts from previous years and worm trend
- Grit prescription from previous year if applicable
- Other clinical signs noted: mortality / underweight / small clutch.

### Arrangements for responsible storage:

- e.g. security, protected from weather.

### Best Practice use of Medicated Grit (GWCT)

- 1 Must** - Collate and retain information required for consideration of vet prescription
- 2 Should** - Medicated Grit station mapping, Spring grouse count mapping, audit trail on grit purchase: quantities and responsible removal and disposal of unused product.

## Placement of medicated grit and grit box hygiene

Where a prescription is dispensed, medicated grit should be distributed using appropriate containers set out on a lattice of sites across the moor, with frequency broadly relating to the grouse pair density in spring, i.e. a grit station in each territory. Grit sites should be either marked, using sections of alkathene pipe or small posts, or the grid reference of each grit site recorded either using a hand-held GPS or mobile app (e.g. Epicollect grouse moor management projects available through GWCT).

- Siting of grit boxes is important. Place them in short vegetation, at least 5m away from running and open water. Place stones around them to help make them more obvious to grouse.
- Use small (20 x 15 cm), well-drained trays or boxes, that grouse cannot easily sit in to help reduce contamination from faeces. Raising containers slightly off the ground will aid drainage. Preventing the boxes from holding moisture is essential to reduce contamination risks.
- Regularly change gritting station positions each year to mitigate contamination risks.
- Medicated grit can only be placed in gritting sites and made available to grouse after shooting has finished in the autumn. It must be withdrawn from grouse at least 28 days before shooting starts.
- No more than a small handful of grit should be provided at each station.
- Grit trays should be checked regularly to monitor their use and kept clean. Replenish used grit if necessary. Unused trays may benefit from relocation.
- Only use fresh medicated grit each year. Do not place new medicated grit on the top of old grit. Remove unused medicated grit by the date stipulated on the product label and certainly no later than 28 days in advance of shooting commencement in the area. Responsibly dispose of it using a registered waste disposal contractor or possibly via the prescribing vet. Ideally, containers should also be removed and cleaned by power washing, before reusing.

