

# Golden rules for a healthy flock

## Advice on restocking sheep flocks

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### The golden rules

All movements of sheep must comply with current livestock movement regulations.

#### **For purchasers**

- Develop a flock health plan with your veterinary surgeon.
- As far as possible purchase from flocks of known disease status.
- Know what questions to ask the prospective vendor.
- Apply the principles to ALL purchased sheep.
- Make sure you take action where possible on scrapie in sheep.
- If purchasing from abroad ensure that you comply with all of the post-import rules and regulations.

#### **For vendors**

- Develop a flock health plan with your veterinary surgeon.
- Provide evidence of whether or not the important diseases have occurred in your flock.

# The development of a healthy flock

## Introduction

Purchasing replacements and mixing of sheep from several sources can bring new disease onto the farm. Restocking provides an ideal opportunity to exclude many of the diseases that affect sheep and therefore improve the health, welfare and profitability of your flock.

The purpose of these advisory notes is to provide information on how to try to prevent buying in infection into new flocks when restocking. The information applies to:

- Those farms purchasing replacements.
- Those farms establishing a completely new flock after losing their animals to FMD.

## Buying in replacements

Although requirements will vary from farm to farm, the following notes provide details of the basic principles that should be considered:

- Where possible buy replacements directly from one flock and transport them from the farm of origin directly to their new home.
- Buy sheep that are suitable for the land on which they will be grazed and for the job they are required to do. Check teeth, udders and in the case of rams that they are reproductively sound.
- Buy rams and ewes in good time to allow for a period of quarantine before mixing groups. Where possible this should then be followed by a period of two to three weeks before ewes are put to the ram.
- It is helpful to collect from the vendor as much information as possible on the recent history of the flock and what treatments/vaccinations the animals

have received. A veterinary examination prior to purchase and transport may help in identifying important diseases in sheep.

- Restocking provides an ideal opportunity to improve the scrapie status of the flock. There are many rams that have already been tested by scrapie genotyping for their ability to pass on resistance to scrapie. Flock owners should attempt to purchase resistant rams if possible. Details of the National Scrapie Plan (NSP) have recently been released and information can be obtained by contacting the NSPAC Helpline on 0845 601 4858.
- Flock owners who are looking for sheep from flocks that are accredited as free of maedi visna (MV) or enzootic abortion of ewes (EAE) should contact the SAC Sheep & Goat Health Schemes (SGHS), or a Health Association such as HISHA or a specific Breed Society.
- Those considering the importation of replacements from outside the UK are advised to seek the advice of the local Divisional Veterinary Manager.
- Sheep may also acquire diseases from other species such as cattle. An advisory leaflet entitled “Golden Rules for a healthy herd” (PB5967) is available from DEFRA publications (see page 12 for details).

## **Transport of replacement stock**

- The latest FMD outbreak has highlighted the need for clean animal transport. Every effort should be made to ensure that your newly purchased replacements are transported in clean vehicles.

## **What should you do when the animals arrive on your farm?**

The action that you take on the first day that new sheep arrive on your property can have a long term affect upon the health and welfare of your flock. Because so many of the diseases that affect sheep can not be detected by external examination of the sheep you need to assume that one or more of the new animals could be bringing disease onto your farm and therefore the following points make up the IMPORTANT “MUST DO” LIST:

- QUARANTINE ALL SHEEP FOR 21 DAYS
- Treat for sheep scab and lice
- Treat for resistant intestinal worms
- Treat for all stages of liver fluke
- Vaccinate against Clostridial disease
- Under most circumstances consider vaccination against pasteurellosis.
- Examine all the feet of all the sheep and treat as necessary for foot rot. Separate affected and non-infected animals and foot bath both groups to eliminate the disease.
- Consider vaccination for enzootic abortion and toxoplasmosis.

## What other diseases should I be concerned about?

### **Scrapie**

A prion disease that causes brain lesions leading to abnormal gait and wasting. Scrapie is a notifiable disease and must be reported accordingly. Details of the National Scrapie Plan have been recently released and are available by contacting NSPAC Helpline on 0845 601 4858.

### **Caseous lymphadenitis**

A bacterial disease that mainly causes abscesses in the lymph nodes of the head and neck. At the abattoir the carcasses of affected lambs will probably be condemned.

### **Border disease**

A viral disease that causes abortion and weak, hairy lambs known as “hairy shakers”.

### **Maedi-Visna**

A rare viral disease that mainly causes pneumonia and wasting.

### **Tick-borne diseases**

These can cause a problem when sheep are moved into a tick area without being previously exposed. The new sheep lack immunity built up over a period and can become ill and even die.

### **Johne's disease**

A bacterial disease of the intestine which results in wasting.

### **Mastitis and teeth problems**

The udders and teeth of all the incoming sheep should be checked.

## **Flock Health Plan**

One of the important requirements of the sheep welfare code is that flock owners should maintain a flock health plan. You are advised to consult your private veterinary surgeon on the development of that plan.

# External parasites

Purchased sheep may well be infested with small numbers of sheep scab mites or lice. These are virtually undetectable, even on close examination. It must always be assumed that incoming sheep from whatever source are infested.

## Control

To safeguard the resident sheep all incoming sheep must be isolated and treated to eliminate any sheep scab mites or lice.

- There is a huge choice of products available to both treat and prevent sheep scab and lice infestations.
- They all have their place but for incoming sheep the choice must be narrowed to ensure that treatment is 100% effective.
- Both sheep scab and lice are becoming resistant to the Synthetic Pyrethroids (SPs).
- Many treatments demand two doses at various intervals, these too are unsuitable as the objective is to fully treat at one handling.
- No shower or jetting races have been approved for the treatment of sheep scab and again are not suitable for the application of insecticide to newly purchased sheep.

## Requirements to eliminate sheep scab and lice

### **Sheep scab**

Treat with an injectable (endectocide) which only requires a single dose to be fully effective. This will not treat lice. An added benefit is that it will worm the sheep and is effective against resistant worms. An alternative to an injectable is to plunge dip in an Organophosphate (OP) dip. This will also treat any lice present.

## **Lice**

Ideally plunge dip in an OP. Where this is not possible pour on SPs may be used. However many lice are now resistant to the SPs and they have no action (when used as pour-ons) against sheep scab. No injectable treats lice.

Of the two parasites sheep scab is potentially the most devastating and the major effort must be directed against it.

# Liver fluke infection (fasciolosis) in sheep and cattle

Infection in cattle has been included because they must be considered for satisfactory control if both species are kept on the farm.

## The disease

- Parasitic disease of the liver of cattle and sheep caused by the liver fluke, *Fasciola hepatica*.
- Infection occurs via infective stages present on herbage.
- Symptoms vary depending on numbers of immature and mature flukes present in the liver.
- Large numbers of immature fluke produce acute disease in sheep with sudden death from September to December.
- Chronic infections with adult fluke in the bile ducts produce anaemia, weakness and oedema (“bottle-jaw”) with deaths in February–March.
- Cattle are more resistant to infection so that acute fluke disease is only rarely seen in calves.
- Chronic infections in cattle produce anaemia and loss of condition.
- Milk production depressed in adult milking cows.
- Commonest in wetter, western areas of Britain and Ireland.
- Distribution dependent on presence of snail intermediate host.
- Levels of infection and incidence of disease linked to rainfall from May–October.

## Control

- In endemic areas, drainage helps eliminate snail habitats.
- Prevent access to small snail habitats by fencing off wet areas in autumn.

# Treatment

In average rainfall years

- Dose cattle once in December or January.
- Dose all sheep in October and January with drug effective against immature stages.
- Dose in May with effective flukicide drug. (Combination roundworm and fluke drench can be used at this time only)

If rainfall heavy in previous year

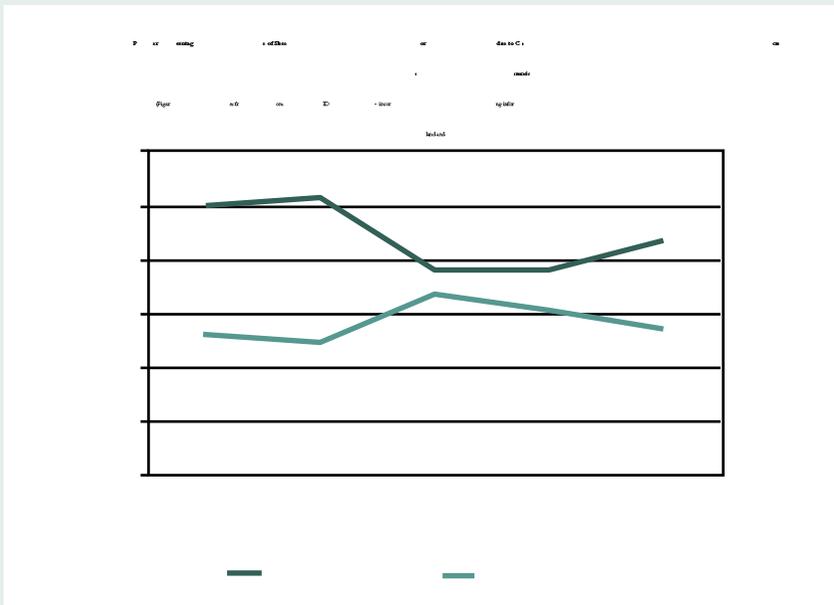
- Dose out-wintered cattle in May.
- Additional doses may be required for sheep in November and June with a drug effective against immature fluke stages.
- Treatment intervals depend on activity of flukicide against immature stages.

You are strongly advised to consult a veterinary surgeon for information on appropriate flukicidal drugs and control strategies for your farm.

# Enzootic (chlamydial) abortion

Enzootic abortion is due to infection with the organism *Chlamdophila abortus* and this gives rise to the more correct term – chlamydial abortion.

The graph shows the percentage of abortions due to chlamydial infection since 1996. Although there has been a reduction in recent years, probably due to the use of vaccination, this infection continues to be the most commonly diagnosed cause of ovine abortion in the UK.



## Clinical Signs

- Abortion with dead lambs 2–3 weeks before term.
- Birth of very weak lambs.
- Placenta covered with pink-brown material.

## **Risk Factor**

Clean flocks become infected through the introduction of clinically normal, but infected, replacement ewes.

Because ewes show no clinical signs until they abort it is not possible to eliminate affected animals when buying replacements.

Ewes that have aborted are able to breed again but some may continue to carry infection and be a risk to the rest of the flock. Flock owners should consider this when reviewing their control strategy.

## **Control and Prevention**

### **Control**

There are several other causes of abortions. If in any doubt, consult your veterinary surgeon over the diagnosis and appropriate control.

Mark and isolate ewes that have aborted.

Remove and destroy aborted fetuses, dead lambs, placentas and contaminated bedding.

Clean and disinfect lambing pens between ewes (if possible it would be better not to use infected pens again, but that may not be practical).

Discuss with your private veterinary surgeon the use of an appropriate antibiotic in order to reduce the level of environmental contamination.

### **Prevention**

Maintain a closed flock or purchase replacements, including rams, from sources known to be free of chlamydial infection, e.g. Health Scheme Flocks.

Where the chlamydial status of the flock is unknown then a vaccination policy should be implemented.

## Zoonotic Risks

Infected lambing flocks are a threat to pregnant women because the sheep strain of chlamydia can infect the human placenta resulting in human abortion and stillbirth.

Pregnant women are advised not to work with sheep when pregnant, especially during the lambing period. Similarly pregnant women should not be exposed to weakly lambs and possibly infected clothing from those working with the flock.

This leaflet was produced in collaboration with:  
Food Standard Agency (FSA )  
National Farmers Union (NFU)  
National Sheep Association (NSA)  
Scottish Agricultural Colleges, Veterinary Science Division (SACVSD)  
Sheep Veterinary Society  
Veterinary Laboratories Agency

Printed on recycled paper containing 75% post consumer waste  
and 25% Elemental Chlorine free virgin pulp.

Produced by DEFRA © Crown Copyright October 2001. PB 6145  
Further copies are available, free of charge, from  
DEFRA Publications Admail 6000, London SW1A 2XX. Tel: 08459 556000.

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