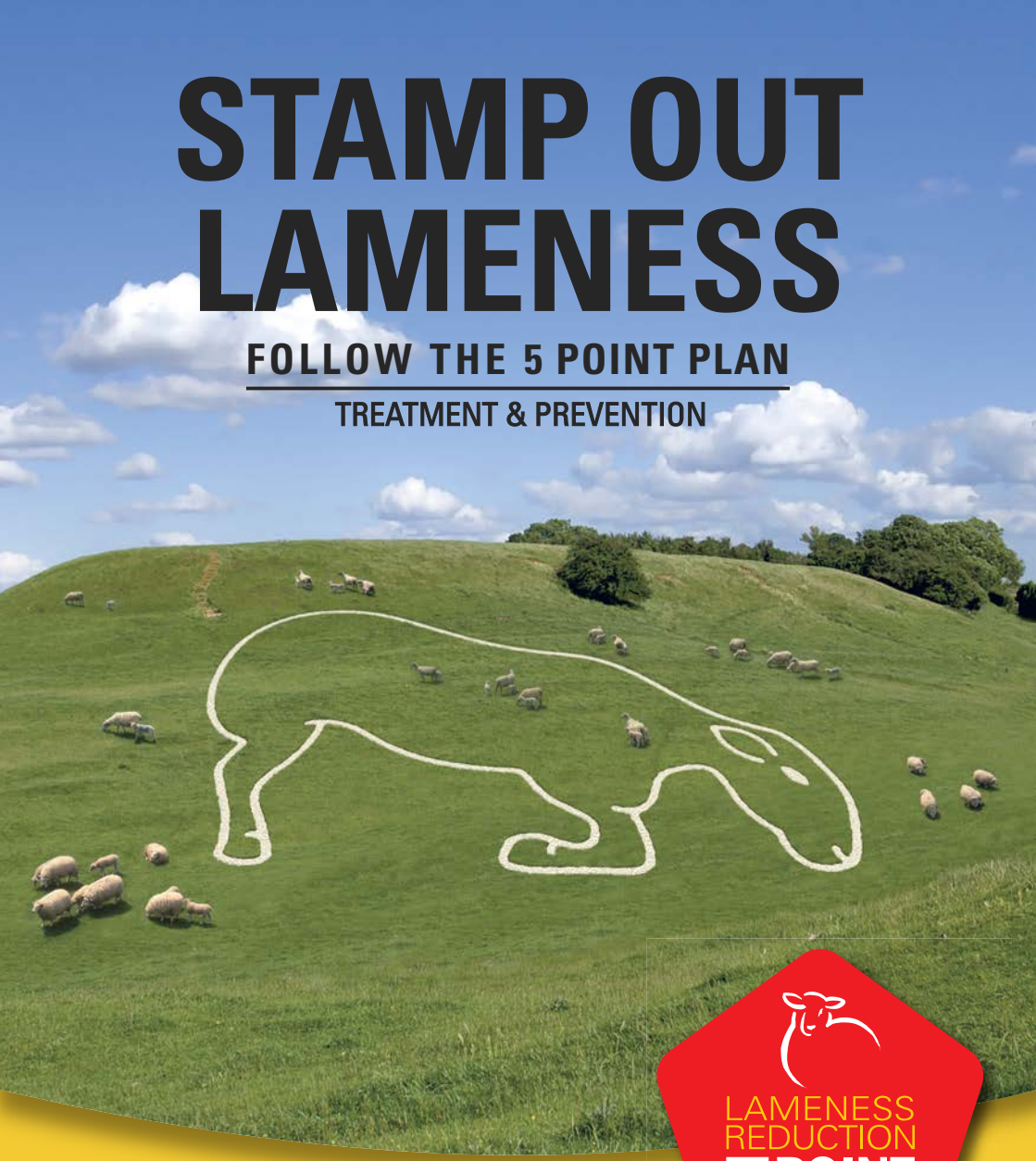
STAMP OUT LAMENESS

FOLLOW THE 5 POINT PLAN

TREATMENT & PREVENTION



LAMENESS REDUCTION 5 POINT PLAN

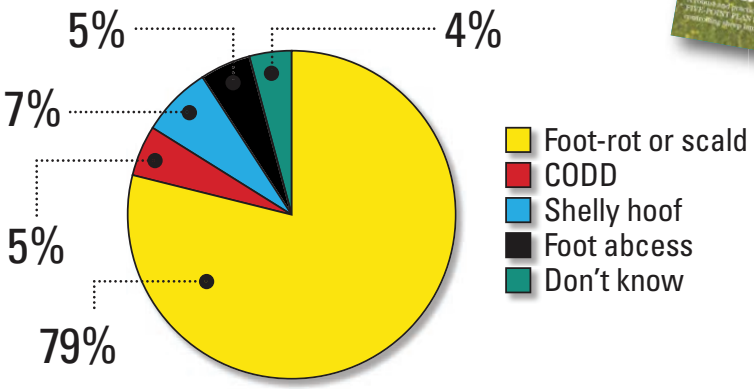
Footvax™
For Footrot

MSD Animal Health

The most common causes of sheep lameness

Sheep lameness, in particular footrot, is undoubtedly one of the most important health and welfare issues facing the UK sheep farmer. Poorly controlled, sheep lameness causes visible pain, reduces performance and costs the sheep industry millions of pounds in terms of labour, treatments and premature culling.

Most common causes of sheep lameness (Farmers Weekly Survey 2012)



A recent survey[1] with farmers and vets, found that not only is footrot regarded as the most common cause of lameness (79%) but the cost of having 8% lame sheep in a flock of 1,000 costs the farmer up to £15,000.

39% of respondents claimed 3-5% of their flock suffered with lameness at any one time and 15% reported that 6-20% of the flock would be lame at any one time.

When tackling a specific disease area, there are two types of intervention that can be used individually or together. These interventions are split into two groups:

Preventative, which incorporates:

- Management
- Biosecurity
- Vaccination

Therapeutic, which incorporates:

- Strategic treatment
- Emergency treatment

Sheep lameness is managed most successfully by a combination of preventative and therapeutic approaches, and the *Lameness Reduction Five-Point Plan* incorporates both.

Footrot is an important health and welfare issue facing farmers

How the 5 Point Plan can help

The most common cause of lameness is Footrot which is an extremely painful, production-limiting disease that affects sheep of all ages.

Affected animals show:

- Lameness
- Reduced wool quality and yield
- Poor reproductive performance

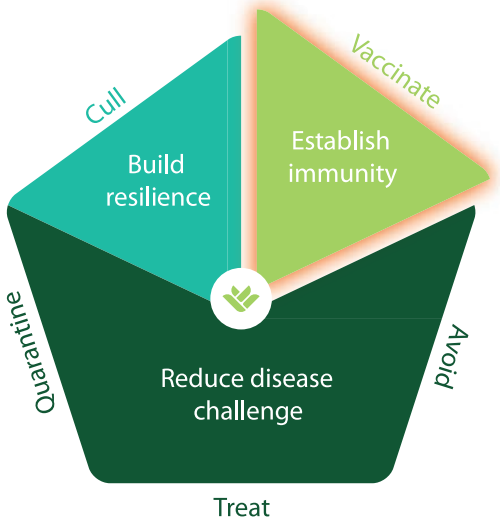
Footrot is caused by *Dichelobacter nodosus* infection, which is carried by infected sheep and remains infectious for a maximum of 10 days on contaminated pasture.[2] This means the feet of infected sheep are the main source of infection. The Footvax vaccine stimulates immunity, which is why it can help both prevent footrot and treat it.

Correct diagnosis

Although footrot is the most common cause of lameness in sheep, it is easy to confuse the different lameness conditions. If in any doubt, ask your vet to help by examining some of your affected sheep.

Footvax is avalable in
20ml, 50ml & 250ml presentations

The Five Point Plan for Lameness Reduction

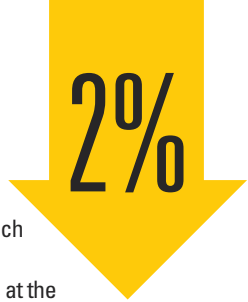


Vaccination is an integral part of the
Five Point Plan for Lameness Reduction

Online video available

for vaccination guide visit
www.msd-animal-health.co.uk/videos

Reduce your sheep lameness down to 2%



The five-point plan is a long-term management programme designed to reduce lameness in your flock. By implementing the five points in conjunction with each other, the incidence of sheep lameness can be reduced below 2% by the end of the third year of implementation.[3] You need to make a commitment to reducing lameness at the start, but by following this approach, you should have to do less and less as lameness improves.

The five points are listed below:

Vaccinate animals to stimulate immunity

- Footvax vaccination forms part of a whole flock approach to disease control, as raising flock immunity helps increase the success of the other four points in the plan
- Treatment frequency varies, especially if you are continuously buying-in stock, but vaccination should be bi-annual to start, with the potential to reduce it to annual depending on flock circumstances
- Dose: 1ml with 6 monthly booster (refer to Footvax FAQ's page overleaf)
- Vaccination: Treatment - immediately (according to guidelines highlighted in this guide)
  Prevention - one month before risk period
- Packs: 20ml (20 doses), 50ml (50 doses) and 250ml (250 doses)

Cull badly or repeatedly affected animals

- If a ewe has footrot more than once in a season she should be given a cull tag to help prevent the cycle of infection – culling may be high in the first year, but will reduce dramatically as you progress

Quarantine incoming animals

- Have a good procedure in place to separate bought-in stock for 4 weeks after purchase:
  - if possible, run bought-in stock through a footbath and monitor lameness
  - buy from a source which has a strict lameness protocol

Treat clinical cases early

- With each incidence of lameness costing £8.38/ewe[3], preventing and treating it early has strong financial and performance benefits for the whole flock

Avoid spreading infection at gathering and handling

- Things to consider:
  - appropriateness/practicality of foot bathing
  - investing in a mobile handling unit, if appropriate
  - improving cleanliness and drainage of handling area
  - placing gravel on entrance to handling facility to help prevent poaching
  - putting lime around water troughs
  - shutting gates between fields – graze one field then the next
- All of the above can help to reduce spread of infection

Footvax FAQs

How do you inject Footvax?

A dose of 1ml should be injected under the skin, on the side of the neck (2-3 inches behind the ear). Take care not to inject into muscle. We recommend the use of the MSD Animal Health 1ml/2ml Subcutaneous Vaccination Pack which includes the Sterimatic system to help minimise bacterial contamination from wool and skin that can cause abscesses.

Are there any considerations during cold weather?

The vaccine contains an oil adjuvant and it will aid administration in cold weather if the vaccine is gently warmed by immersion in warm water (not hot) for 3-4 minutes prior to use.

Can Footvax be given at the same time as other vaccines?

No, we recommend leaving a minimum of two weeks to allow the immune system to fully respond to one vaccine before using another.

What about other products?

Sheep that have previously been given Footvax should never be injected with moxidectin 1% injection. Some sheep can develop a sensitivity, this is uncommon but can be fatal. This does not apply to moxidectin drench or 2% injection. For futher information please contact the manufacturer of the product in question.

Can pregnant ewes be vaccinated?

Yes, but not within one month either side of lambing, this is to avoid stress at critical times.

Can rams be vaccinated?

Yes, all sheep in the flock should be vaccinated. You should avoid giving Footvax in the six weeks before rams are turned out with the ewes and during the mating period as any stress during this time can temporarily affect fertility.

Does Footvax cause lumps?

Yes. It is not uncommon for sheep to get a sterile lump at the site of injection but this tends to resolve over a 4-10 week period. For this reason, avoid vaccinating before shearing and discuss timing of vaccination in show sheep or breeding sheep for sale with your flock health advisor. If infection is introduced on a contaminated needle this can cause an abscess.

How many injections are needed?

Start vaccination with a single 1ml subcutaneous injection. It is advisable to give 2 injections 4-6 weeks apart where there is a high incidence of footrot, or in the face of a severe outbreak, followed by 6 monthly boosters. However a single annual booster may be sufficient once lameness due to footrot has been successfully reduced to a very low incidence, or where there is a clear annual risk period. Timing should be 4 weeks before risk periods e.g. housing.

Presentation: Emulsion for injection containing per dose (1 ml) 10 µg pili of each of *Dichelobacter nodosus* serotypes A, B1, B2, C, D, E, F, G and H and 5 x 10^8 cells of *D. nodosus* serotype I. 60% Light mineral oil NF and 4.5% Manide oleate are added as adjuvants. 0.015 % Thiomersal is added as a preservative.

Uses: For the active immunisation of sheep as an aid to the prevention of footrot and reduction of lesions of footrot caused by serotypes of *Dichelobacter nodosus*.

Dosage and administration: *Dose:* 1ml.

Administration: Initial Course: Two doses, 6 weeks apart by subcutaneous injection. The site for injection is on the side of the neck 2-3 inches behind the ear. Thoroughly shake the vaccine before use. As the vaccine contains an oil adjuvant it is rather viscous. It will aid administration in cold weather if the vaccine is gently warmed by immersion in warm water (not hot) for 3-4 minutes before use. Syringes and needles should be sterilised before use and the injection made through an area of clean, dry skin, taking strict precautions against contamination in order to reduce the possibility of abscess formation.

Vaccination programme: These should be tailored to meet individual flock requirements which will vary from season to season according to the actual or likely incidence of footrot. Wherever possible 'whole flock' vaccination programmes should be adopted. By this means disease incidence in the flock will decline and subsequent disease risk from the environment will be greatly reduced.

Prevention programme: Commence vaccination with a single dose of vaccine. Further doses of vaccine will be required according to the flock disease status and/or the climatic conditions. If, after 4-6 weeks significant levels of disease remain in the flock or climatic conditions conducive to footrot persist, administer a further dose. Otherwise delay this dose until conditions favour re-emergence of the disease. Subsequent doses should also be administered according to prevailing conditions. Thus, with severe and constant disease challenge, revaccination may be necessary at 4-5 monthly intervals; conversely under favourable conditions revaccination may be delayed until the incidence of disease challenge increases or climatic conditions worsen. It should be noted that these adverse conditions tend to occur in the UK between March and May and between October and December thus, vaccination should normally be completed shortly before these periods if problems are anticipated.

Treatment programme: A single dose of vaccine should be given to the flock immediately the disease becomes apparent. For maximum effect, treatment with Footvax should be combined with the use of a footbath, hoof-paring and antibiotic treatment. Revaccination should be as stated in the prevention programme, which should then be continued on the farm as the key element of the overall flock foot care programme.

Contra-indications,warnings, etc: Can be used during pregnancy. Do not vaccinate sheep within 6–8 weeks of shearing. Do not use in lactating dairy sheep. Do not vaccinate ewes in the period of 4 weeks before lambing to 4 weeks after lambing. Sheep destined for show or sale should not be vaccinated within the previous 6 months because of the occurrence of a well defined, inactive lump at the site of injection.

Adverse reactions: The vaccine may cause a reaction at the site of injection. This may range from a slight swelling from about 24 hours after injection, to a well-defined lump of about 3 cm diameter 8 days after injection. These may further increase in size to 5 or even 8 cm diameter but these swellings generally remain inactive and may resolve completely within 4-6 weeks. Frequently swellings persist for at least ten weeks. Occasionally, however, these swellings may be large, painful and unsightly, with the formation of abscesses which may burst and discharge, particularly if any contaminating skin bacteria are introduced at the time of injection. Even so, partial or complete resolution within ten weeks of inoculation can be expected. Reactions to second doses develop more slowly but the formation of necrotic lesions is rare. Occasionally abscesses may be noted on macroscopic examination of injection sites. Subcutaneous necrosis and inflammation may be noted on microscopic examination of injection sites. On rare occasions variable incidence of generalised lameness has been reported in vaccinated sheep. This is thought to be due to a local immunological reaction in the feet and is transitory in nature, occurring within 24 hours of vaccination and normally persisting for no more than 48 hours. Treatment is seldom necessary. Occasional hypersensitivity reactions may occur. In such cases an appropriate dose of adrenalin and/or antihistamines should be administered without delay. When the vaccine is given at twice the recommended dose a reaction similar to that described above should be expected. In some cases skin lesions with overt pus accumulation or slight necrosis develop. This necrotic skin lesion and pus accumulation occurs less frequently following a second injection. There are no adverse clinical signs in animals following treatment with 2x dose. There is no specific antidote.

Interactions: No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product except those mentioned above. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be decided on a case by case basis.

Do not mix with any other veterinary medicinal products.

Operator warnings: *To the user:* This product contains mineral oil. Accidental injection/self injection may result in severe pain and swelling, particularly if injected into a joint or finger, and in rare cases could result in the loss of the affected finger if prompt medical attention is not given. If you are accidentally injected with this product, seek prompt medical advice even if only a very small amount is injected and take the package leaflet with you. If pain persists for more than 12 hours after medical examination, seek medical advice again.

To the doctor: This product contains mineral oil. Even if small amounts have been injected, accidental injection with this product can cause intense swelling, which may, for example, result in ischaemic necrosis and even the loss of a digit. Expert, PROMPT surgical attention is required and may necessitate early incision and irrigation of the injected area, especially where there is involvement of finger pulp or tendon.

Withdrawal period(s): Zero Days. For animal treatment only. Keep out of reach and sight of children.

Pharmaceutical precautions: Store and transport refrigerated (2°C to 8°C). Protect from light. Do not freeze. Once opened use immediately.

Disposal advice: Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with the local requirements.

Legal category: POM-VPS

Packaging Quantities: Carton with one bottle containing 20 ml, 50 ml and 250 ml.

Footvax™
For Footrot

References: 1. Farmers Weekly Magazine Sheep Lameness Survey 2012. 2. Ruma guidelines. Responsible use of vaccines and vaccination in sheep production. November 2006. 3. FAI Trial 2009-2012.

With thanks to Mr C Lewis BVetMed, DipECSRHM, DSHP MRCVS for supplying photographs.

Use medicines responsibly. For more information visit www.noah.co.uk/responsible

Footvax is only available via your animal prescriber or veterinary surgeon from whom advice should be sought.

MSD Animal Health

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