THE SHEEP FARMER’S GUIDE TO:

ORF and its control

Scabivax™ Forte

Does more than scratch the surface
ORF is a highly contagious disease primarily of sheep and goats, caused by a parapox virus. People working with infected sheep can also catch ORF.

The virus causes pustules and scabby lesions to develop on the non-woolly areas of the skin and occasionally in the mouth and throat. Minor abrasions of the skin are required to establish infection, which is why flocks kept on rough grazing - or on pasture with a high proportion of thistles - can be particularly prone to the disease.

The orf virus can survive for many years in a dry environment, such as in lambing sheds, which is why more serious outbreaks are generally associated with intensive sheep systems where there is a build-up of infection in buildings. The virus is less likely to survive outside on wet pasture.

It now seems likely that the virus can survive on the skin of some sheep for many years without causing disease. It is only when an abrasion to the skin occurs that the orf virus can enter the body and cause disease.

ORF in the UK

Orf is particularly common in the border counties of England, Wales and Scotland, although outbreaks do occur all over the country.
The problems caused by ORF

Orf affects ewes, rams, sucking lambs and weaned grazing lambs and may occur at any time of year. Sometimes the disease can be virtually undetectable, whilst in other cases 100% of a flock can be affected with death rates exceeding 5%.

In the milder form of the disease, symptoms include blisters - followed by ulcers - on the lips and corners of the mouth. In severe cases, the vesicles form on the insides of the mouth and throat and can spread to other parts of the body such as the vulva, teats, legs and tail. Invariably, affected animals lose weight and when orf lesions affect the teats of ewes, reduced sucking and mastitis are the costly consequences.

ORF in Ewes

Orf lesions in ewes are usually found on the udder and teats. It is uncertain whether lesions occur on the teats prior to infection of the lambs, or whether infection is introduced to the teats from infected lambs.

The discomfort caused by teat lesions means the ewe will often not allow the lamb to suck. As a result, lambs will try to steal milk from other ewes and this spreads infection further.

When orf affects the udder and teats, one of the major consequences is acute bacterial mastitis. When this happens at least half the udder is lost and the ewe often dies.

ORF in Young Sucking Lambs

Orf lesions in young sucking lambs are usually confined to the mouth and nostrils, but occasionally extend into the mouth and throat. Mouth pain prevents feeding and lambs suffering from orf can easily die, usually due to a combination of dehydration and starvation.

ORF in Grazing Lambs

Post-weaning lambs are also susceptible to orf, particularly those introduced to rough grazing, areas rich in gorse or pastures with thistles. Once the skin is broken, the orf virus can infect the sheep and cause disease.

Older lambs are unlikely to die from infection, but sometimes secondary bacterial infections can make the condition much more severe.
How is ORF transmitted?

The Virus in the Environment
Studies carried out by The Moredun Foundation have shown that scabs from diseased lesions retain the potential to infect other animals for far longer when kept dry.

It is likely that the virus can persist in buildings - and on handling equipment and troughs that are kept dry - for many years. Consequently, thoroughly cleaning and disinfecting buildings may help control the disease.

If subjected to moisture, the virus is inactivated. Consequently, carry over of infection on pasture from year to year is unlikely in the UK.

Carrier Animals
Orf frequently appears in previously closed and uninfected flocks after the introduction of new rams or ewes. There is also evidence that uninfected flocks grazing pastures abundant in thistles - on which no sheep have grazed for years - still succumb to the disease, suggesting the presence of carrier animals where the virus has persisted on the skin.

Humans can catch ORF
People handling infected sheep, wool or skins can catch orf. The disease causes localised swollen, red areas - usually on the hands, fingers or face - which can be very painful, respond poorly to treatment and take weeks to heal. In a small number of individuals orf can trigger a severe systemic reaction, which may require hospitalisation.

WARNING!

Preventing and controlling ORF

Preventing ORF
In flocks that have never experienced orf, the aim should be to maintain disease-free status by carefully selecting replacements from known orf-free premises. Bought-in stock should be isolated from the main flock and examined for any signs of disease. In addition, practise good pasture management with the emphasis on controlling thistles.

Vaccination SHOULD NOT BE USED in flocks that have never experienced orf - it is only to be used in flocks trying to manage a problem.

What to do when faced with an ORF outbreak
Remember, orf is a virus so treatment regimes generally deliver poor results. Antibiotics are only effective at treating secondary bacterial infections developing in the site of ulcers. Orf is in fact self-limiting and if secondary infections are controlled, natural healing will occur in 24 to 28 days.

Isolate any infected animals
If you do spot any cases of orf it is important to isolate (ideally indoors if possible) the affected animals as soon as possible to prevent the spread of infection. Generous bedding should be provided to reduce the risk of any unaffected animals coming into contact with scabs that may have been shed.

Nursing and treatment
Affected lambs, or lambs from badly affected ewes, should be nursed if possible to reduce pain and discomfort. Ill animals should also be fed artificially, paying scrupulous attention to hygiene of teats, bottles and utensils. Astringents such as Crystal Violet dressings may be useful to speed up natural recovery.

Usually ewes with severely infected teats can be dried off early and antibiotics administered, under veterinary supervision, to prevent secondary mastitis.

Vaccination
In the face of an outbreak, vaccination with Scabivax Forte will help reduce the severity of the disease problem and protect animals not yet infected. Use a Scabivax Forte applicator for easy administration of the vaccine.

Available in 50 dose vials
Annual ORF vaccination

Vaccinating Ewes
Ewes should be vaccinated before disease is anticipated, but not during the last seven weeks of pregnancy. Vaccine is applied by scratching the bare skin under the front leg using the Scabivax Forte applicator.

Vaccinating Young Lambs
Lambs can be vaccinated at any time from birth. It is important that lambs are vaccinated by scratching the skin between the top of the foreleg and the chest wall. Do not vaccinate unweaned lambs in the groin because the animals can reach the scratch site with their mouths, thus infecting their lips and potentially their mother’s udder.

Vaccinating Young Lambs
Older lambs can be batch vaccinated before leaving housing for pasture. Older lambs can be vaccinated between the top of the foreleg and the chest wall. If orf does strike older lambs, an important aspect of treatment is to vaccinate in-contact animals to reduce the percentage of lambs with disease. Good results have been reported when this regime is adopted. Always consult your vet about the most appropriate orf vaccination regime for your affected flock. It is important that vaccinated animals do not come into contact with unvaccinated animals for at least seven weeks after vaccination.

Important notes
- Do not use Scabivax Forte on farms where orf is not present
- 7-10 days after vaccination check a group of sheep for vaccination “take”. This appears as a line of pustules/scabs along the scratch
- The Scabivax Forte applicator should be sterilised in boiling water before and after each use
- Do not use disinfectants to clean the applicator, as this may harm the vaccine
- Do not vaccinate ewes less than 7 weeks before lambing as scabs contain live orf virus
- Do not vaccinate ewes or lambs during wet weather to avoid vaccine being washed away
- Wear gloves whilst vaccinating sheep as the product contains live virus which can be transmitted to humans

How to use Scabivax™ Forte

The Scabivax Forte applicator will deliver a precision dose of orf vaccine with each single scratch.

1. Loading
- Ensure bottle is upright
- Place vaccine bottle in sleeve
- Push bottle firmly onto the draw-off needle in the applicator
- Turn applicator to the locked position

2/3. Priming the Applicator
- Ensure the Scabivax Forte applicator is in the locked position (indicated by arrow)
- Prime the applicator, by pressing on the base of the vaccine bottle sleeve in a pump like action
- Priming should take about 10 pumps for the first dose
- The applicator is primed and ready for use when the first drop of vaccine flows onto the applicator prongs
- The precise dose will remain supported by the applicator prongs until the product is applied
- IMPORTANT: Point applicator to the ground when priming

4. Applying the vaccine
- Vaccinate on the bare skin under the front leg
- Hold the applicator at an angle to the skin of approximately 45 degrees and ensure both wires of the applicator tip are in contact with the skin area
- Press the applicator prongs firmly onto the skin and make a single scratch approximately 4-5cm (2 inches) in length
- The scratch should break the skin but not draw blood
- Each pump delivers one dose of vaccine

Precision dosing

The orf vaccine Scabivax Forte comes with a revolutionary, leak-proof, reusable pump mechanism applicator that delivers an exact dose every time. Packed in 50 dose vials, the convenient scratch applicator helps with the correct administration of the vaccine.
Scabivax Forte is a blue coloured, liquid live vaccine containing live orf virus. Each 0.02ml dose contains $10^{5.4}$ TCID$_{50}$ of orf virus.

**Uses**
For the active immunisation of sheep and lambs against orf to reduce clinical signs and/or lesions of the disease. Immunodevelopment within 4-8 weeks of vaccination and is protective against severe signs of contagious pustular dermatitis for at least 12 months.

**Contra-indications**
Do not use on farms or in flocks where orf disease is not a problem. Do not vaccinate ewes less than 7 weeks before lambing. Do not vaccinate pregnant ewes except at the recommended stage of pregnancy.

**Special Precautions for Use**
Scabivax Forte is a live virus vaccine, and thus care must be taken to apply the vaccine only to the intended vaccination site and to not contaminate other sites such as mouth, feet, superficial wounds or abraded skin of the animal. Vaccinated lambs may transmit the disease to ewes' udders. For a period of up to 7 weeks after vaccination, or until the scabs resulting from the vaccine “take” have dropped totally, animals will be shedding virus infected scabs. During this time, vaccinated animals should not be allowed access to lambing pens or pasture where ewes and their lambs will subsequently be grazed; allowed to come into contact with unvaccinated sheep and susceptible species; marketed, slaughtered or shorn. Care should be taken to avoid treatment of the animals near the period of vaccination with substances or medicaments that might interfere with the “take” of this live vaccine. Do not administer or treat with surface-active agents such as antiseptics, sprays or dips within 7 days before or after administration of the vaccine. Do not administer corticosteroids or other immunosuppressive drugs within 28 days before or after administration of the vaccine. Do not vaccinate ewes or lambs during wet weather.

**Protection of Consumers**
Withdrawal period zero days.

**Environmental Safety**
Care must be taken not to contaminate the ground area with vaccine or used materials due to the persistence of orf virus in the environment.

**Operator Warnings**
Orf disease is caused by a virus which is communicable to man. The vaccine is capable of causing a skin infection in humans so should not be used by immuno-suppressed individuals. In the case of accidental self-administration (injection or scratch), ingestion or spillage onto the skin or into the eye, seek medical advice immediately and show the package insert or label to the physician. Rubber gloves should be worn when handling this product or dismantling the applicator. Hands and arms should be washed after vaccination.

**Legal Category**
Scabivax Forte is only available via your veterinary surgeon from whom advice should be sought.

**TM Trademark**
Scabivax TM Forte

**References:**
The University of Reading: The Economics of Orf
The Moredun Foundation: Orf - The Facts

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**ORF control checklist**

- Keep orf out of your flock by buying replacement stock from known, disease-free sources.
- Quarantine any bought-in sheep and examine them for any orf symptoms.
- If you do spot any cases of orf in your flock, isolate affected animals immediately.
- If practical, nurse affected animals to minimise pain and discomfort.
- Talk to your vet about alternative treatment to minimise the chance of secondary bacterial infections.
- Provide plenty of bedding for diseased animals to reduce the chances of non-affected animals coming into contact with any infected scabs that have been shed.
- If orf does break out in your flock, talk to your vet about controlling the disease by implementing a current and future vaccination regime with Scabivax Forte.
- Be aware that humans can catch orf - make sure all staff are aware of the health consequences of working with infected stock.

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**Scabivax™ Forte**

Does more than scratch the surface.
Scabivax™ Forte contains live orf virus. Further information is available on request. Legal category POM-V

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