

MV in non - PSGHS flocks – a potential huge risk factor

In October and November a few breeders and vets asked us for advice after MV was newly diagnosed in non-health scheme flocks. In some cases MV was identified during pre-export testing, and as a result these sales were cancelled.

In one of these flocks half of the ram lambs in a group were MV positive. One ram lamb that had been sold to another flock was tested and was found to be positive. It had mixed with the stock rams on its new holding and there was concern that the stock rams could have become infected from the bought-in ram lamb. These stock rams could not be used for breeding as infection would then be introduced to their ewe flock. This highlights the importance of buying MV accredited stock.

In recent years the owner of a Mule flock of over 1000 ewes had noticed an increase in the number of mastitis cases. Over 100 ewes

were culled each year with bad udders. It was only when a proportion of the ewes were blood sampled for MV that it was discovered that up to 80% of the ewes were infected with MV. The same level of infection was detected in the stock rams. Ewes with mastitis, ewes losing condition, some with signs of pneumonia and a high level of ewe deaths with over 100 ewes dying each year all impacted on the profitability of the flock. There were also more cases of joint-ill than usual. It is possible that MV affected the udders and the colostrum was poorer in quality and lower in volume as a result, which pre-disposed the lambs to joint-ill.

Due to such a high level of MV infection, and heavy losses, the only practical option is to cull the mule flock and to replace it. It is not economically feasible to cull the whole flock at the one time so it will be phased out over a few years whilst building up an isolated, clean flock through breeding their own Mule replacements. We will be looking at the cost of MV infection in this flock in more detail and will work with them to help create a new flock.

Farm Inspection

Each year inspectors acting for PSGHS check that the rules and conditions of the schemes are being observed in a sample of members' farms. A few members are suspended as a result of non compliance issues.

In all cases, the "non compliance" has been evidence of contact between MV accredited and non MV accredited stock. The contact was either through inadequate internal fencing, boundary fencing (to neighbours), or at gateways (need to be double gated to reduce risk of exposure to non accredited flocks) or in housing.

Members must have separate drench guns, needles and taggers for the MV flock.

Remember:
You can lose your valuable MV status.

Look at bio-security on your own farm.



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Johne's Disease in sheep

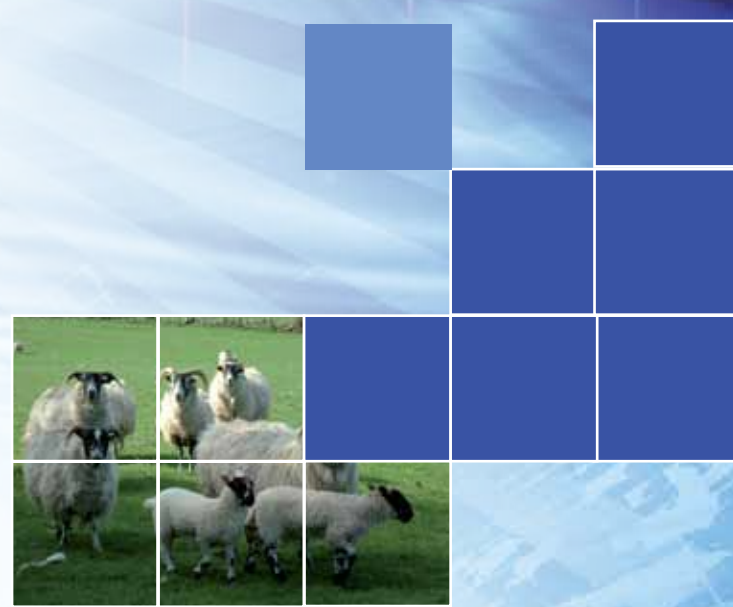
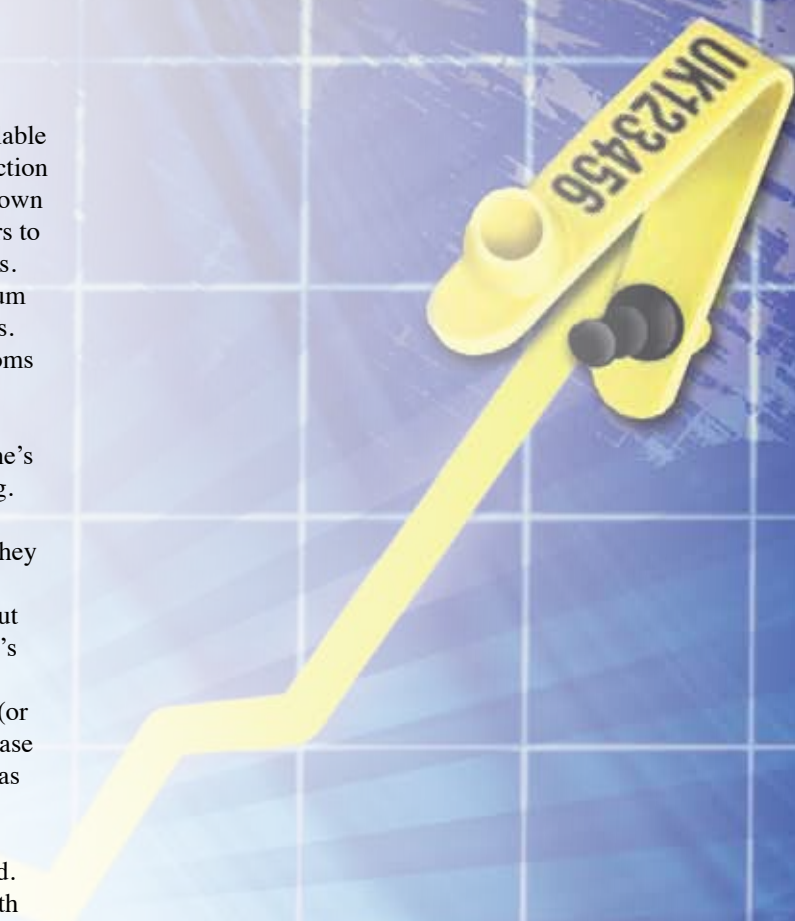
Information about Johne's disease in cattle is widely available and many herds are working to reduce their levels of infection through membership of health schemes. It is less well known that Johne's disease can affect sheep and that there appears to be more outbreaks of the disease, particularly in hill flocks. The disease is caused by the bacteria *Mycobacterium avium* paratuberculosis (MAP) which is spread in infected faeces. Young lambs are most susceptible to infection but symptoms do not develop until several years later.

Whereas cattle develop a severe scour, most cases of Johne's disease in sheep present as a loss of condition and wasting. On an annual basis if you are picking out ewes that are thinner than their flockmates for no apparent reason (i.e. they are not lame or broken mouthed) then Johne's may be the problem. Affected sheep remain bright and keep eating but continue to lose weight even on good grazing. The Johne's bacteria damages their intestine so that they are unable to absorb protein and eventually they become weak and die (or are culled). A few may scour in the late stages of the disease and they can develop a swelling under their chins known as bottle jaw (similar as happens with liver fluke).

Diagnosing Johne's disease in sheep is not straightforward. It is one of several conditions that results in thin ewes with no specific symptoms. The most reliable way of confirming a diagnosis is to submit one or more thin, cull ewes to your nearest SAC disease surveillance centre for postmortem. This also allows other conditions such as Jaagsiekte (OPA), Maedi Visna, liver abscesses and chronic lung or parasitic disease to be ruled out.

The main aim of controlling the spread of Johne's disease is to reduce the chances of young lambs becoming infected. Lambs born to infected ewes are very likely to become infected themselves either before birth, via infected milk or contact with the ewe's faeces. Intensive management increases the likelihood of young lambs becoming infected. Plenty of clean, dry bedding should be used at lambing and the ewes should be dagged if necessary. Lambs searching for a teat will take in bacteria from wool contaminated with faeces. Suspect cases of Johne's disease should be culled. Stocking densities should be as low as possible and ewes and lambs moved out of the shed as soon as possible. Clean water should be available.

The bacteria can live in water for 9 months, slurry for 11 months and in soil for almost 4 years. Feeding dairy cow colostrum to lambs is a potential risk. Avoid spreading slurry on fields that are to be grazed. Researchers have discovered that the Johne's disease bacteria can be found in wildlife such as rabbits and deer but it is not known how this is related to disease in livestock.



Should you be screening for Border Disease?

Border Disease can cause high barren rates and/or abortions, stillborn, weak and deformed lambs. The latter include so called “hairy shakers” as they have hairy fleeces and show mild to severe tremors. Border Disease is caused by a virus that is closely related to BVD in cattle. In both cases infection is spread by animals that are born persistently infected with the virus, (PIs). These lambs can be ill thriven and may scour and die around weaning time. Some will survive to maturity and continue to excrete virus for their whole life thus acting as a source of infection to other sheep. Border Disease can infect cattle but this appears to be rare. It is much more common for BVD to spread from cattle to sheep.

In 2010 a farm unknowingly sold persistently infected ewe hoggs as breeding replacements to several flocks. The problem came to light the following spring when losses due to Border Disease were diagnosed in these flocks and the problem traced back to the original flock. In 2011 the flock owner decided to screen all ewe hoggs so that they could be sold guaranteed free of Border Disease, in order to protect his reputation as a supplier of quality ewe replacements and to re-gain buyer confidence. 20 animals infected with virus were detected. The consequences for both buyer and seller could have been severe had these 20 ewe hoggs been sold into flocks

free of Border Disease. To avoid re-introducing the problem the farmer blood tested all his purchased sheep to ensure they tested negative for Border Disease virus.

What can you do to avoid similar problems?

- Maintain stock proof boundaries that prevent nose to nose contact.
- Do not graze/house pregnant ewes alongside cattle.
- Source sheep that have been tested pre sale. If this is impossible then blood sample purchased sheep and screen for Border Disease virus.
- If the cost of this is too high then restrict testing to purchased tups. Run purchased ewes in isolation from the rest of the flock from arrival until after lambing. Although higher risk than blood sampling this is also good practice to guard against the spread of other diseases such as EAE and campylobacter.
- Investigate high barren rates, abortions etc.
- If selling breeding stock consider screening pre sale to promote the health status of your flock.





From Robert Gregory, Edstaston Charollais, Shropshire

Being a member of the Maedi Visna Accreditation scheme is an integral part of our business bringing with it numerous benefits. I like the idea of belonging to an elite group of high-health status breeders which the scheme affords us.

By being members of the scheme we can reduce lamb losses, barren ewes and the poor growth rates associated with MV. Apart from the health benefits, being scheme members allows us to attend shows and sales where we can achieve premium prices for our stock.

Showing is a very important shop window for not only our business but for the Charollais breed in general. If we were not MV accredited we would not be eligible to compete at the top shows in the country and hence we would miss out on the chance to showcase our stock. A fast growing part of our business is the export market and to have access to this lucrative market we need to be M.V. accredited.

Being a member of the Scrapie Monitored Scheme has very similar benefits to the MV scheme in so much that you have to be a member to have access to some of the export markets. Scrapie is a fatal disease of sheep that we have worked very hard over the years to control. Membership of SMS demonstrates to potential purchasers of our stock that we have had no evidence of scrapie.

EAE - did you know?

- EAE is estimated to cost the sheep industry £20 million annually.
- EAE was first described in 1936. Initially it was thought to be caused by environmental factors such as dietary deficiency.
- In 1950 it was shown to be an infectious condition.
- Australia and New Zealand are free of EAE.
- Closer to home the Shetland Islands are considered free of EAE with an on-going programme of testing imported ewes on arrival and after lambing.
- EAE can also infect and cause abortion in goats, llamas, pigs, cattle and deer as well as pregnant women.
- All bovine abortions submitted to veterinary laboratories are routinely screened for the organism that causes EAE.

In 2011:

- EAE remained the number one diagnosed cause of ovine abortion across GB accounting for 42% of diagnoses in Scotland and 49% in England and Wales.
- There were again problems with vaccine availability.
- Sales of EAE Accredited ewes were good and showed an economic benefit.
- The membership of the EAE scheme increased by 10%.
- Fewer members failed their annual flock test. The main risk factors were the purchase of non accredited ewes and the farm location being in areas where EAE is common.

There is a demand for EAE accredited stock – please contact **01463 226995** to get your flock accredited.



Edstaston 2011 ewe lambs

How and when does a sheep become infected with MV?

The main source of infection is from aerosol droplets from the lungs which are spread through close nose to nose contact. Colostrum and milk from infected ewes can be sources of infection for lambs. In theory the virus can also cross the placenta to infect unborn lambs however this seems to be rare. In fact it is possible to obtain uninfected lambs from infected ewes by snatching lambs at birth before they have had a chance to suckle or be licked or sniffed by the ewe. Semen has been shown to contain MV virus and could be a potential route of infection from an infected ram. Equipment e.g. taggers, tattooing equipment, dosing guns and needles that have been used on infected sheep could possibly also transfer the virus. Virus could also be transferred on the hands or clothing e.g. if mouthing sheep during judging or whilst dosing.

The virus will not survive for long outwith the body but livestock trailers and pasture could be sources of infection if they have previously been used for infected sheep. It is for this reason that seven days must be left between grazing non-MV accredited sheep and MV accredited sheep and that livestock trailers must be cleaned and disinfected before being used by accredited sheep.

Sheep can therefore become infected at any stage of their life with the greatest risk being from close nose to nose contact with an infected sheep. All flocks must have at least a two metre gap between accredited and non-accredited sheep at all times. Virus will spread more readily if sheep are closely confined e.g. in sheds at lambing time so higher levels of infection are seen in intensively managed flocks.

Recently identified MV infected flocks

Every year we test many thousands of blood samples for the MV/CAE accreditation schemes. The great majority of samples test negative for these diseases but since October 2010 we have identified eleven positive submissions. One was a flock going through a first qualifying test, another three involved added animals going through qualifying tests and seven were routine periodic flock tests where a breakdown had occurred.

Four (57%) of the seven flocks that lost status had non-MV accredited stock on the holding. Less than 25% of scheme members have non-accredited flocks in addition to an accredited flock so, as we have found in the past, having non-accredited sheep on the same holding increases the risk of having a breakdown by over two fold. Five breakdowns were within 15 miles of other known MV infected flocks, which indicates that there is infection in the local area. Two of the holdings where there were breakdown flocks were within a mile of another known infected flock. Sheep of the following breeds were found to be positive: Texel, Lley, Charollais, Suffolk, Romney and Wiltshire.

Progress with 2010 breakdown flocks

Of the 13 flocks that were previously MV accredited but had a breakdown with MV between January and October 2010, nine have now eradicated infection and have regained MV accredited status. One flock has passed a first qualifying test and has some groups of isolated sheep that have gained MV accredited status. Another flock is still eradicating infection. Two flock owners opted not to attempt to regain MV accredited status.

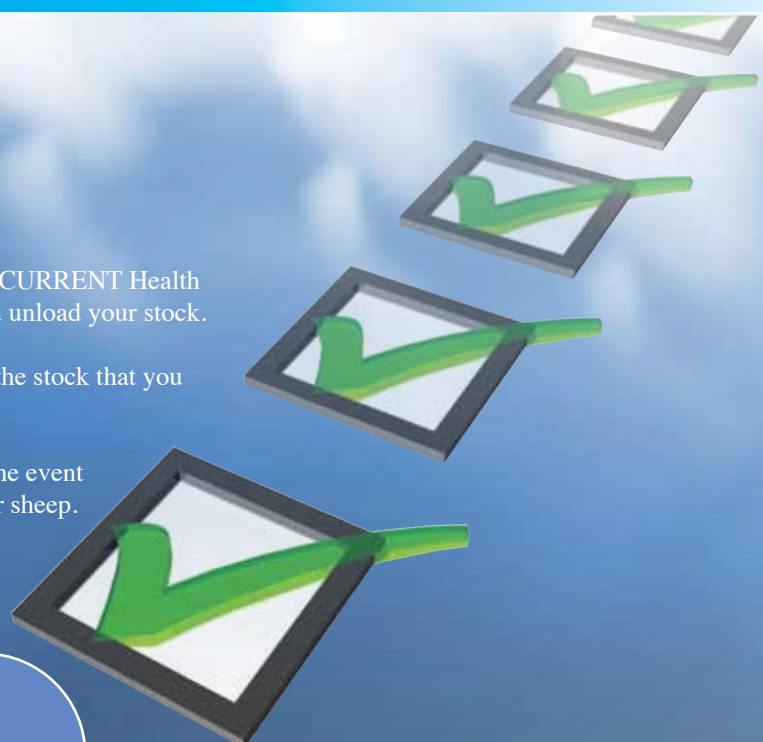
Shows and Sales

When you attend shows and/or sales please ensure that you have a CURRENT Health Status Report in your possession as this will be checked before you unload your stock.

Please also ensure that you have listed the identities and breeds of the stock that you have presented and have signed your declaration.

Challenge the show society if you see no evidence of checking at the event you are attending. You are protecting the valued MV status of your sheep.

Few non compliance issues were found by our inspectors at shows in 2011 but if you are aware of issues at particular shows please let me know.



Change of test method for the MV/CAE accreditation scheme

You will notice that the format for reporting blood test results has changed slightly to accommodate a change of the test method. Previously the tests in the MV/CAE accreditation scheme were always the MV and CAE AGID tests. Recently we were forced to change the routine MV/CAE test used because the AGID reagents are no longer available for goats, and they may only be available in the short term for sheep. We carried out validation on three different ELISA tests initially to determine which one best met the requirements of the scheme. ELISA tests are significantly more expensive than AGID tests and they also require much more expensive equipment for the analysis. In order to avoid having an increase in the test costs for members we have validated the testing of pooled samples in the ELISA test.

The procedure adopted is very similar to that which has been used for many years in the Netherlands. We test samples in pools of four in the ELISA test and samples from pools above a certain level of reaction are then individually tested in the AGID test.

No CAE infected goats have been identified since December 2009 through health scheme testing.



Premium Sheep & Goat Health Scheme



The New Website

Have you looked at the all-new PSGHS website - www.psghs.co.uk.

We believe that this new website is of immense benefit to the sheep and goat industry. Anybody trying to source a particular breed of ram in a certain location can do this quickly on the site.

PSGHS members can print off their own Health Status Reports and can look at their own pages and check testing status.

If your details are missing send the PSGHS Office your e-mail address. A disclaimer needs to be signed to authorise the display of your details on the website. Have you done this? If unsure contact the PSGHS office.

A further development allows flockowners with their own web page to link it to the PSGHS website. If you have a web page and wish to set up this feature, please send us the link to your web page.

We are striving to give you a resource which will be of benefit to you, our customers.

Effect of treatments or vaccination on MV/CAE test results

The MV and CAE blood tests are widely used and there is no evidence that any treatment or vaccine used in sheep or goats will cause a cross-reaction or false positive result in the blood test. Also MV or CAE infection can not be masked by giving antibiotics or any other treatments. This is because MV and CAE are caused by a virus, and antibiotics, which target bacteria, have no effect on them.