

22 April 2008

Bluetongue Q&A on vaccines and the vaccination plan for England

1. [What is Bluetongue?](#)
2. [How is it spread?](#)
3. [What's happened in Northern Europe?](#)
4. [What is the current situation in the UK?](#)
5. [What can we expect this year?](#)
 - 5a. [What movements are allowed in the PZ?](#)
 - 5b. [What movements are allowed in the SZ?](#)
 - 5c. [Where can I find out about Licences?](#)
 - 5d. [What disease incidence and patterns can we expect this year?](#)
6. [If there is no animal to animal transmission why do we have movement restrictions?](#)
7. [Can I treat animals for Bluetongue?](#)
8. [Is there a vaccine?](#)
9. [How do vaccines work?](#)
10. [What vaccines are already licensed for UK livestock?](#)
11. [Is the BTV8 vaccine live or dead?](#)
12. [What is the UK's Vaccination Plan?](#)
13. [Why are we vaccinating in the PZ only?](#)
14. [How will the vaccine policy operate?](#)
15. [Who decides the order of priority and how?](#)
16. [How much will the vaccine cost?](#)
17. [Will my vet have to administer it?](#)
18. [What dosage and administration of Bovilis® BTV8 is needed to protect my stock?](#)
19. [I farm in the SZ or Free Area. Will I be able to vaccinate my animals?](#)
20. [Will I be able to move vaccinated animals?](#)
21. [Will I be able to sell the meat / milk after vaccination?](#)
22. [Will my calves or lambs need to be vaccinated too?](#)
23. [Will we ever eradicate BT?](#)
24. [What are other UK and European countries doing?](#)
25. [I export animals – can I still vaccinate?](#)
26. [Will vaccination affect my organic status?](#)
27. [Will Bovilis® BTV8 protect against other serotypes of BT?](#)
28. [I fatten cattle over a 2 or 3 month period – do I need to vaccinate them?](#)
29. [If my animals get Bluetongue, how much compensation will I be paid?](#)

1. What is Bluetongue?

Bluetongue (BT) is a viral disease of ruminants (cattle, sheep, goats and deer). There are 24 serotypes of BT which until recently have been limited to Mediterranean and equatorial climates. The UK and northern Europe are currently dealing with Bluetongue serotype 8 (BTV8), although other strains of the virus (BTV Serotypes 1, 2, 4, 9 and 15) have been found in recent years in southern Europe. Since it appears that climate change may be a factor in the spread of different strains of BTV from Africa and Asia into Europe, it cannot be ruled out that other strains of the virus may come to affect the UK in the future.

2. How is it spread?

BT is a vector borne disease, i.e. it needs an able carrier to transmit the disease from one animal to another. These carriers are specific species of the Culicoides midge family. The UK has 4 of these specific types in its resident midge population.

The female breeding midge is the only midge to actually bite. She is unable to lay her eggs without first having a blood meal. If she carries the virus in her bloodstream, she can transmit the virus to her 'victim' during this feeding process. The virus can then be transmitted from the animal to another biting midge and the cycle continues. There is no direct animal to animal transmission.

3. What's happened in Northern Europe?

In August 2006, BTV8 appeared in Germany for the first time. We are still unclear how it got there. Cases were soon detected in Belgium, Holland, Luxembourg and northern France. Initial infection was mild and localised. However, the virus over-wintered and re-appeared in dramatic fashion last summer. Tens of thousands of cases of Bluetongue were recorded in France, Belgium, Germany, Holland and Luxembourg, with cases also being detected for the first time in Denmark, Switzerland and Sweden as well as the UK.

Italy has reported its first BTV8 cases recently, although the route of introduction is still being investigated.

Of further significance is the recent appearance of Bluetongue serotype 1 in Spain and southern France. Diagnostic tests do identify serotypes of Bluetongue as a matter of course so we can be reassured that we will know exactly what serotype we have in the UK upon clinical diagnosis.

The symptoms of the BTV8 infection are much more significant during the second year of infection with some farms seeing high rates of mortality in sheep as well as other physical symptoms and important financial losses.

A regularly updated map showing Restriction Zones across Europe can be downloaded from http://ec.europa.eu/food/animal/diseases/controlmeasures/bluetongue_en.htm. A Restriction Zone (RZ) is the combined area covered by the Protection Zone and Surveillance Zone.

4. What is the current situation in the UK?

Initially infection was restricted to East Anglia and the South East of England. Recently however, and as a result of pre-movement testing during the vector free period, the virus has also been found in Dorset. Protection zones (PZ) have been established around these infected areas.

There is a larger area surrounding the PZ called the Surveillance Zone (SZ). Animal movements are restricted out of these areas, subject to veterinary risk assessments surrounding midge activity and permitted, licensed movements.

At the time of writing there have been over 120 infected premises confirmed within the GB PZ.

5. What can we expect this year?

MOVEMENTS AND ZONES

5a. What movements are allowed in the PZ?

A Protection zone (PZ) is established in order to try to contain disease within an area around an infected premise. The PZ boundary should always be at least 20km away from any infected premises.

Movements of animals and midges may still spread disease within the zone, however, sufficient surveillance and reporting of signs of disease should monitor the levels of spread, and new infected premises are most likely to be found within this zone.

Given the nature of the disease, it can be assumed that there will always be a level of undetected infection in the PZ i.e. as clinical signs of disease are not always apparent. Therefore, any movement of susceptible animals out of the PZ has the potential to spread disease to a new and previously uninfected part of the country.

Animals can move freely within a PZ, so any decision to extend a PZ geographically (e.g. to allow vaccination in a wider area) must be balanced against the risk of wider movement of potentially infected animals.

There are no restrictions on the movement of pigs as they are not susceptible to Bluetongue.

- You can move ruminants anywhere within the Bluetongue Protection Zone (PZ).
- You can move ruminants to specifically licensed abattoirs in the Bluetongue free area.
- You can move ruminants into the Bluetongue PZ from the SZ, however you must then comply with the rules within the PZ.
- You can move ruminants that are protected from vector attack into the Bluetongue Free Area, subject to pre-movement testing and specific conditions.
- You can move naturally immune ruminants into the Bluetongue Free Area, subject to pre-movement testing and specific conditions.
- You can move ruminants to the confluent northern European Bluetongue Protection Zone (PZ).

Please treat this as a general guide and not a definitive position. Always check the current licence position before considering any movement from the PZ. The Defra website gives details of all the relevant licences, please follow this link:

<http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/movements/index.htm>

5b. What movements are allowed in the SZ?

A Surveillance zone (SZ) is established to maintain a buffer area around the PZ. The size of the zone is set in EU legislation as at least 150km radius from any infected premises.

Due to the nature of the spread of Bluetongue, new cases can be found outside of the PZ.

Any movement of susceptible animals out of the SZ (although a lesser risk than the PZ) has the potential to spread disease to a new and previously uninfected part of the country. Therefore the zone and the movement restrictions within provide a vital buffer against further and wider spread of disease.

There are no restrictions on the movement of pigs as they are not susceptible to Bluetongue.

- You can move ruminants anywhere within the Bluetongue Surveillance Zone (SZ) or Welsh Bluetongue Restricted zone.
- You can move ruminants for slaughter to specifically licensed abattoirs outside the SZ.
- You can move ruminants into the Bluetongue Protection Zone (PZ) however, you must then comply with the movement restrictions within the PZ.
- You can move ruminants that are protected from vector attack into the Bluetongue Free Area, subject to pre-movement testing and specific conditions.
You can move naturally immune ruminants into the Bluetongue Free Area, subject to pre-movement testing and specific conditions.

Please treat this as a general guide and not a definitive position. Always check the current licence position before considering any movement from the SZ. The Defra website gives details of all the relevant licences, please follow this link:
<http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/movements/index.htm>

5c Where can I find out about Licences?

Before you move any stock, it is recommended that you check licence conditions to ensure you comply with the regulations.

Information can be found on NFU Online under the Bluetongue page (<http://www.nfuonline.com/x23015.xml>) or on the Defra website (<http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/movements/index.htm>).

5d What disease incidence and patterns can we expect this year?

From experiences of other N European member states, it is highly likely that the UK will experience a similar explosion of infection during this second year to that seen elsewhere in continental Europe during 2007. The bar chart below compares the number of BTV8 outbreaks experienced in Germany during 2006 and 2007.

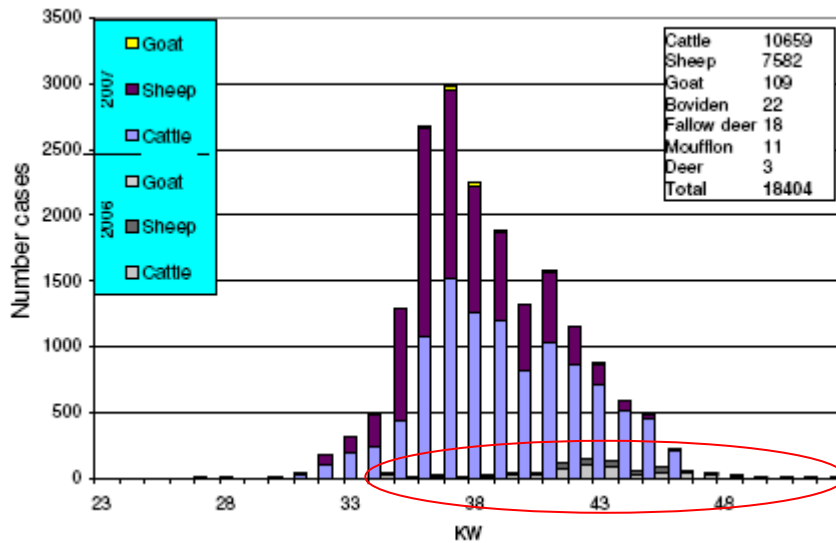


Chart showing outbreaks in Germany 2006 / 2007 - "Thanks to FLI-Wusterhausen, Germany".

The bar chart is best viewed in colour. The tall bars, coloured in blue (cattle), dark red (sheep) and yellow (goats), represent the number of cases in 2007 whilst the very short bars sitting within the red ellipse represent the number of cases of cattle, sheep and goats in 2006, presented to the same scale.

The Institute of Animal Health (IAH) has recorded the following statistics for Germany and Belgium during 2007, their second year of infection.

	CATTLE	SHEEP
GERMANY		
Disease incidence (Morbidity %)	1.85 %	5.82 %
Deaths as a % of the national herd / flock (Mortality)	0.15 %	2.10 %
Deaths amongst those animals infected (%) (Case fatality)	8.27 %	36.11 %
BELGIUM		
Disease incidence (Morbidity %)	6.8 %	27.3 %
Deaths as a % of the national herd / flock (Mortality)	0.6 %	11.2 %
Deaths amongst those animals infected (%) (Case fatality)	17.7 %	41.9 %

Infected but surviving animals suffer from infertility, increased abortion rates, loss of condition and milk yield, an inability to swallow and therefore eat properly and an increased risk of secondary health problems such as mastitis, lameness and digital dermatitis.

The scientists at IAH have recently uncovered a further worrying development about BTV8 – the possibility that the BTV8 virus can survive the winter by passing from pregnant, but BTV8 infected, ruminant animals to their unborn foetuses.

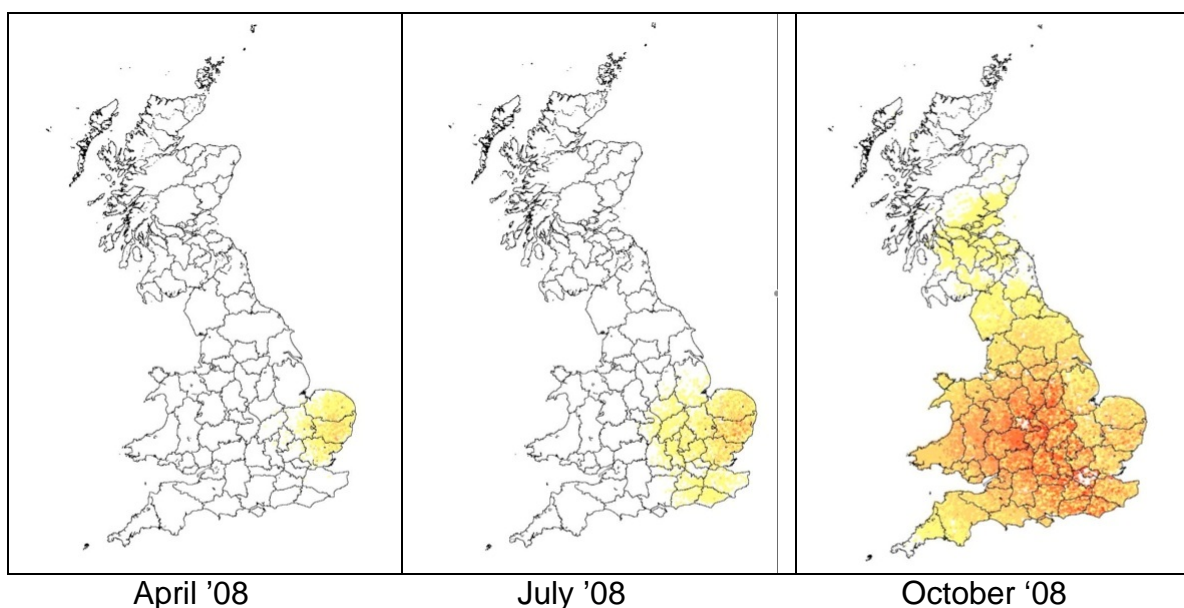
Until recently most bluetongue scientists agreed that cross-placental infection by the BT virus of an unborn foetus from its mother only occurred when laboratory-adapted strains of virus were used and the mother was infected during her pregnancy under lab conditions. These experiments resulted in resorption of the foetus, abortion, and the birth of weak or deformed offspring. Amongst these ‘surviving’ offspring some were shown to have bluetongue virus in their bloodstream i.e., they were viraemic.

It was not thought possible that this could happen in the field until recently when, in Holland and the UK, viraemic offspring have been born to animals that were infected last year.

Work at IAH-Pirbright in the 1970s showed that infectious virus was present in the offspring up to 60 days after birth. As the dams had been infected at around 60-70 days into their pregnancy, this means that there was a period of approximately 145 days between infection of the mother and the end of viraemia in the offspring. Such a time would easily cover the period from the end of one transmission season (December; when the temperatures are too cold for midge activity and too cold for the virus to grow in midges) to the start of the next (April; when temperatures rise sufficiently) in the UK and elsewhere in northern Europe.

There is the distinct possibility that this new development could increase the disease reservoir in the UK, potentially providing ‘clean’ midges with a fresh source of virus when they take a blood meal.

The IAH, in conjunction with the Met Office, have modelled potential disease spread across GB during 2008, in the absence of vaccines and following typical climate and midge patterns. Their prediction is shown in the diagram below:



6. If there is no animal to animal transmission why do we have movement restrictions?

There are legal obligations on Member States, under the Council Directive 2000/75/EC, implemented by Commission Regulation (EC) No 1266/2007, to implement rules on movements of certain animals, control, monitoring and surveillance. These are justified as they are of, 'fundamental importance for safe trade in susceptible farmed animals moving within and from restricted zones...'

Another reason to restrict animal movements is to try and prevent uninfected midges in BT free areas of the country from coming into contact with potentially infected animals and becoming infected midges. This is the reason why movements are generally allowed, with conditions, to go from low disease risk areas to high disease risk areas but not back again.

7. Can I treat animals for Bluetongue?

There is no cure for Bluetongue. It is recommended that infected animals are given soft food to eat, and extra husbandry care. Secondary problems (such as lameness and mastitis) can be treated with anti-inflammatory drugs or antibiotics but these should be given following consultation with your vet. **You should be mindful of any withdrawal periods that apply to any drugs that are administered to alleviate the symptoms of BTV8.**

8. Is there a vaccine?

On the 2nd April, the Veterinary Medicines Directorate licensed Bovilis[®] BTV8, a vaccine produced by Intervet, for use in the UK as a vaccine against BTV8.

Intervet have a contractual agreement with Defra to provide 22.5m doses of Bovilis[®] BTV8 for use in England and Wales (20m doses are reserved for use in England and 2.5m doses are reserved for use in Wales.) It is anticipated that the first 3m doses of vaccine will be available in May 2008, with further doses available in phases as production resources allow.

9. How do vaccines work?

When a pathogen (an organism which could be a virus, bacteria or parasite and capable of causing disease) attacks an animal, the animal defends itself by producing antibodies which fight the pathogen. This immune response can take time and sometimes the animal is overwhelmed by the pathogen and 'becomes ill'.

Subsequent attacks by the same pathogen stimulate a response by the animal where it 'remembers' the previous attack and produces antibodies quickly and effectively to fight off the pathogen, preventing both illness and the ability to infect others (known as infectivity). This lack of infectivity has the effect of reducing the overall ability of a pathogen to attack a group (or herd) of susceptible animals and is known as 'herd immunity'.

A vaccine acts by copying the natural immune response of an animal, effectively 'introducing' the vaccinated animal to a potential pathogen in a relatively safe manner. This means that if it comes into contact with the actual pathogen at a later date, the animal's immune system will 'remember' the pathogen and produce antibodies, fighting off the disease effectively.

A vaccine may consist of a live, but modified (attenuated), pathogen or killed (inactivated) pathogen.

Killed or inactivated vaccines are made from killed pathogens or parts of the pathogen capable of causing disease. They generally provide short term immunity but are often 'safer'.

In attenuated or live vaccines, the active part of the vaccine (or antigen), is an organism which has been developed to stimulate the production of the appropriate antibodies without causing actual disease. Live vaccines are particularly effective in providing long-term protection as they stimulate a more powerful response from the immune system.

There are however significant risks associated with live Bluetongue vaccines. Live vaccines can cause more severe clinical symptoms in the vaccinated animal than the original disease would if allowed to infect the animal. The applied vaccine can mix with circulating disease, resulting in a more virulent version of disease which could then infect and circulate within the midge population. Live vaccines can also cause disease in some breeds of sheep and potentially cattle, cannot be given to pregnant ewes (as they can cause fetal deformities – a property known as Teratogenesis) and can be a potential source of infection on mating and artificial insemination as the vaccine can be found in the semen of bulls and rams.

The use of live vaccines would therefore not normally be considered as a disease control measure in the UK.

10. What vaccines are already licensed for UK livestock?

Cattle diseases for which vaccines are available:

- Cattle viral diseases such as BVD and IBR
- Cattle bacterial diseases such as Salmonella spp
- Cattle parasites, lungworm
- Cattle fungi such as ringworm
- Clostridial diseases such as blackleg
- Cattle pneumonia
- Calf enteritis such as rotavirus and E.coli
- Leptospirosis

Sheep diseases for which vaccines are available:

- Clostridial diseases
- Enzootic and Toxoplasma abortions
- Footrot
- Orf
- Louping-ill
- Ovine Johnes Disease

11. Is the BTV8 vaccine live or dead?

The BTV8 vaccine being developed by Intervet for use in the UK is an inactive (dead) vaccine.

12. What is the UK's Vaccination Plan?

The UK Vaccination Plan, agreed by Industry and Veterinary representatives, disease experts and Government, has the following objectives:

- A simple mass vaccination programme, with farmers purchasing vaccine and administering it to their animals themselves;
- To prioritise the initial availability of vaccine to the existing PZ.
- To make vaccine available as widely as possible, and rapidly, after those in the existing PZ have been given sufficient opportunity to purchase, and as vaccine is delivered by Intervet.
- To expand the PZ as soon as possible to facilitate vaccine availability (to the extent of the SZ boundary as soon as vaccine delivery allows, possibly staged with some further prioritisation on a risk basis if vaccine is not delivered quickly enough).
- To expand the PZ to the whole of England as soon as sufficient vaccine is available to allow opportunity to vaccinate across this area.
- To implement an industry-led campaign to promote the benefits of vaccination and encourage pre-ordering, to increase uptake.

To achieve the above aims, assessment of the location of zone boundaries will be carried out throughout the period with the Core Industry Group, taking into account vaccine uptake and availability; disease situation and movement risks; economic impact etc.

13. Why are we vaccinating in the PZ only?

The European Council Directive 2000/75/EC permits vaccination in the Protection Zone but prohibits it in the Surveillance Zone. The Commission have also expressed that vaccination will not be allowed in a disease-free area.

14. How will the vaccine policy operate?

Under EU law, vaccination can only be carried out in a PZ. However, due to the unpredictable nature of the disease, the availability of the vaccine and the differences in infection risk throughout the country, roll-out of vaccine will be on a County by County basis – aiding farmers and their vets to easily identify when vaccine may be available or sold.

A map showing the probable roll out priority areas is available from the Defra website: <http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/pdf/mapvacc-080401.pdf> . This map will be subject to change as the disease incidence rises and the area disease priorities change.

Depending on the amount of vaccine available in the first batch in May (an expected minimum of 3m doses), the number of doses will be matched against the sheep and cattle populations (and doses required) of the highest priority counties first, working down a list of counties until no more vaccine is available in that batch.

Once further doses of vaccine become available, they will simply go to the next priority county and so forth. Control of the supply of vaccine will be achieved through legislation and licensing.

The intention is for 100% of the vaccine to be purchased and used by each county, however, it is possible this take-up rate will not be achieved and vaccine will be left unused. Therefore, the take-up levels will be regularly reviewed for each county, and pending these assessments any remaining vaccine stocks may be made available to the next priority County or Counties.

15. Who decides the order of priority and how?

A process for defining a priority list for counties to be vaccinated has been agreed and is described on the Defra website ('Decision making process and criteria for prioritising vaccine roll-out' <http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/control/vaccination-rolloutplan.htm>). This process is based on epidemiological and veterinary risk assessment.

The priority list will be regularly reviewed by Defra, Bluetongue experts and the Core Industry Group in the period leading up to the first vaccine becoming available and on throughout the year.

16. How much will the vaccine cost?

The vaccine will be available in 50ml and 20ml bottles, and will be available through private vets via veterinary wholesalers. The wholesale "list" price will be £22.02 for the 50ml bottles and £13.10 for the 20ml bottles.

The final on-farm price is likely to be around £27.50 - £33.00 for the 50ml bottles (i.e. 55-66p per ml) and around £16.35 - £19.65 for the 20ml bottles (i.e. 82-98p per ml), plus VAT, in order to cover the overhead, handling and administration charges throughout the distribution process.

The vaccine will require one single 1ml dose in sheep and two 1ml doses in cattle given approximately 3 weeks apart.

17. Will my vet have to administer it?

The vaccine has been licensed under the distribution category 'Prescription Only Medicine – Veterinarian (POM-V). This means that it can only be supplied once it has been prescribed by a veterinary surgeon following clinical assessment of the animal or group of animals. Any registered vet or pharmacist may supply the product against a written prescription but you can give it to your livestock yourself.

We suggest that livestock farmers in the PZ speak to their vet as soon as they can to express their interest in the vaccine.

18. What dosage and administration of Bovilis[®] BTV8 is needed to protect my stock?

Sheep

Sheep from 1 month of age: a single 1ml dose by subcutaneous injection. The timing for administering booster vaccinations has not yet been established but it is recommended that animals are re-vaccinated at least 2 weeks before each risk period.

Cattle

Cattle from 1 month of age: Two 1ml doses administered with an approximate 3 week interval by subcutaneous injection. The timing for administering booster vaccinations has not yet been established but it is recommended that animals are re-vaccinated at least 2 weeks before each risk period.

It is recommended to use a multiject vaccination system.

Other susceptible species such as Goats, Deer and Camelids

Bovilis[®] BTV8 is licensed to be used with cattle and sheep only. Other susceptible animals can be prescribed the vaccine under what is known as the cascade system. When there is no suitable medicine available (as in the case of llamas, alpacas, goats, etc for BTV8) this system permits veterinary use of medicines intended for other clinical indications or species, specifically under the direction of a vet. Your vet will be able to advise you on this.

19. I farm in the SZ or Free Area. Will I be able to vaccinate my animals?

Under current EU legislation, vaccination can only occur in the PZ. It is anticipated that the PZ will gradually be extended to the whole of England, as vaccine and the vaccination opportunity becomes available.

20. Will I be able to move vaccinated animals?

The rules for movement of vaccinated animals are set out in the EU Directive but broadly speaking they have to meet one of the following four conditions:

- (1) animals can be moved 60 days (approx 2 months) after vaccination (for cattle, after the second dose has been administered)
- (2) they have both:
 - (a) been vaccinated for at least 3 weeks and
 - (b) had a negative PCR test, carried out at least 2 weeks later;
- (3) they were previously vaccinated and they have been re-vaccinated within 2 weeks of the new risk period (not relevant until 2009)
- (4) they were kept during the seasonally vector-free period in the Bluetongue PZ or SZ, from birth or for at least 60 days (approx 2 months) before vaccination and were vaccinated at least 3 weeks before movement.

Please note: The seasonally vector-free period for 2007/08 ran from 20th Dec '07 until 15th Mar '08. This was dependant on midge activity and weather conditions so we cannot assume that we will have the same flexibility or situation during the winter months of 2008/09.

It is recommended that you check that you comply with legislation before you embark on any livestock movements following vaccination. Keep in close contact with Animal Health, your local NFU office, NFU Online or the Defra website to remain up to date with what you can and can't do.

21. Will I be able to sell the meat / milk after vaccination?

Bovilis[®] BTV8 carries no withdrawal period when administered as licensed to cattle and sheep. Vaccinating other susceptible species under the cascade system will incur withdrawal periods, ask your vet for advice.

The Food Standards Agency has confirmed that, provided any necessary withdrawal period is observed, there are no food safety implications attached to the use of the vaccine.

22. Will my calves or lambs need to be vaccinated too?

We do not yet know the effectiveness of maternal protection through colostrum of vaccinated stock to their young against BTV8.

The licence for Bovilis[®] BTV8, allows vaccination in cattle and sheep to occur from a month old and it is recommended that all susceptible animals on farm, even from this early age, are vaccinated against BTV8.

23. Will we ever eradicate BT?

By vaccinating against BTV8, we can reduce infectivity rates in the national cattle herd and sheep flock so we do have a theoretical opportunity to eradicate BTV8 from the UK. This will be dependant on achieving high levels of vaccination and remaining resolute in our biosecurity and vigilant for signs of disease. We need 100% coverage of vaccination to reduce the infectivity to an effective level.

24. What are other UK and European countries doing?

Scotland

The Scottish government has issued a tender for 12 million doses of BTV8 vaccine to be funded on a 50:50 basis with a maximum of £3m contribution from the Scottish government. The Scottish intention is to implement a compulsory vaccination programme, although it would not be under official supervision and farmers would be able to vaccinate their own animals. The plan is to vaccinate this Winter, meaning they will be vaccinating for 2009 not 2008, unless the disease situation changes which would suggest a need to bring the vaccination plan forward.

On top of the £3m support for vaccination the Scottish Government has also said that it will pay for the enforcement and surveillance for the vaccination plan.

Although the fact that there will be government funding will raise concerns for English farmers, to have run the Scottish proposal in England would have resulted in an increased cost for farmers, without increasing the effectiveness of vaccination, by making it more complicated and slowing down the vaccination process.

The key difference between the Scottish and English situation is that livestock owners in Scotland will be vaccinating for next year, whereas in England we have to vaccinate immediately. They have time to develop their plan and they can phase the vaccination process over the winter months, whereas we need to get vaccination underway quickly. A voluntary mass vaccination plan for England this year is still the best plan.

France

As publicised, France has already had some BTV8 vaccine delivered. However, this vaccine has come from Merial and is limited to around 2m doses, already produced as part of the development process.

Denmark

It is our understanding that the brunt of the costs of the vaccine program in Denmark will fall to the Danish farmers to pay.

Denmark, which will soon be an all-out restriction zone, has put in a tender for vaccine and expects delivery in the autumn.

Germany and Belgium

Although there might be the possibility of an animal disease insurance fund generated by membership fees paid by individual farmers, German and Belgian farmers will still be faced with the restrictions placed on them by co-funding, resulting in them being unable to administer vaccine for themselves. This not only adds costs but also time to the vaccination process.

Are England better off?

In not opting for EU funding, the UK is set apart from the rest of the EU because its farmers are allowed to administer the vaccine themselves, even if it must be prescribed by a veterinarian.

Significantly, this decision will speed up the process, help the UK to get ahead of the disease and stop the devastation seen in the rest of Europe.

25. I export animals – can I still vaccinate?

Bluetongue vaccination is accepted by both the EU and OIE (the World Organisation for Animal Health) as a valid form of controlling Bluetongue. Within the EU, vaccinated animals should be able to be moved between restricted zones (along the same lines as domestic trade) and Defra expect the impact on exports to third countries to be minimal.

26. Will vaccination affect my organic status?

The Soil Association has indicated that there is no risk to the organic status of livestock vaccinated with an inactivated Bluetongue vaccine.

27. Will Bovilis® BTV8 protect against other serotypes of BT?

There are 24 serotypes of Bluetongue and the vaccines in development for use against Bluetongue serotype 8 (BTV8) do not offer any cross-protection against the other 23. If another serotype of Bluetongue enters the UK then the vaccine that we are ordering will have no effect and a new vaccine would have to be purchased or developed.

28. I fatten cattle over a 2 or 3 month period – do I need to vaccinate them?

Bluetongue is transmitted from one animal to another by midges, an almost impossible vector to control. There is no guarantee that your fattening or store animals will remain BTV free. This is not a risk that you can afford to take. Accepted, you have the cost of the vaccine as well as the time and human resource issues around vaccinating to face but failure to vaccinate could cost a lot more for your business. Infected animals generally lose condition which will impact on their sale value; they may contract secondary health problems such as lameness which would prevent them traveling or being sold. If they look sick, they will be rejected on health grounds. Your vet and medicine costs will increase, as could your feed bill while you are forced to hold on to sick or recovering animals. You will also be putting any neighboring farmers' stock at risk as your non-vaccinated animals can act as a disease reservoir for the local midge population. Movement restrictions will be imposed on your farm and the surrounding area. This could have prohibitive business connotations on your enterprise and those of other farms in your locality.

29. If my animals get Bluetongue, how much compensation will I be paid?

Bluetongue was declared as circulating in the UK back in September 2007. Once the disease is declared as circulating, Bluetongue infected animals are not compulsorily killed so do not get any form of compensation. You and your business will be liable for any costs of disease control, veterinary care and medication, on top of additional variable costs such as feed and bedding incurred whilst 'nursing' sick animals or paying for the disposal or veterinary costs associated with livestock deaths.