

In 2012/13, Germany and The Netherlands (NL) reported outbreaks of a haemorrhagic syndrome with high mortality in calves and cows caused by an unusually virulent BVD type 2c. There has been a recurrence of disease caused by this subtype in 2014.

**Situation in mainland Europe:** The AHVLA Cattle Expert Group (CEG) has been alerted to further outbreaks in 2014 of BVD type 2c in Netherlands. To date, 4 veal herds in Noord Brabant have reported outbreaks caused by BVD type 2c. The outbreaks were characterised by mild signs of respiratory distress, depression, high fever, weakness, bloody diarrhoea and high mortality (30-50%) affecting both calves and adult animals. In Germany, BVD is notifiable and affected herds are initially put under movement restrictions (unless moving directly to slaughter) and vaccinated. According to the Friedrich Loeffler Institute in Germany in the first half of this year, 362 companies have reported BVD type 2 infections; however it is not clear how many of these are BVD type 2c. Most infections occurred in the states of North Rhine-Westphalia, Lower Saxony and Bavaria (see map). In 2013, there were 23 outbreaks of BVD 2c in Germany and on some farms, mortality was as high as 50% accompanied by bloody diarrhoea, fever, mucous membrane lesions and haemorrhagic diathesis (Doll & Hollsteg, 2013); it was movement of infected veal calves to Netherlands which led to outbreaks there. Long term shedding of virus was seen in some animals and the disease is highly contagious. The prevalence remains very low in both affected countries and spread between neighbouring farms appears to be very limited provided there is good biosecurity.

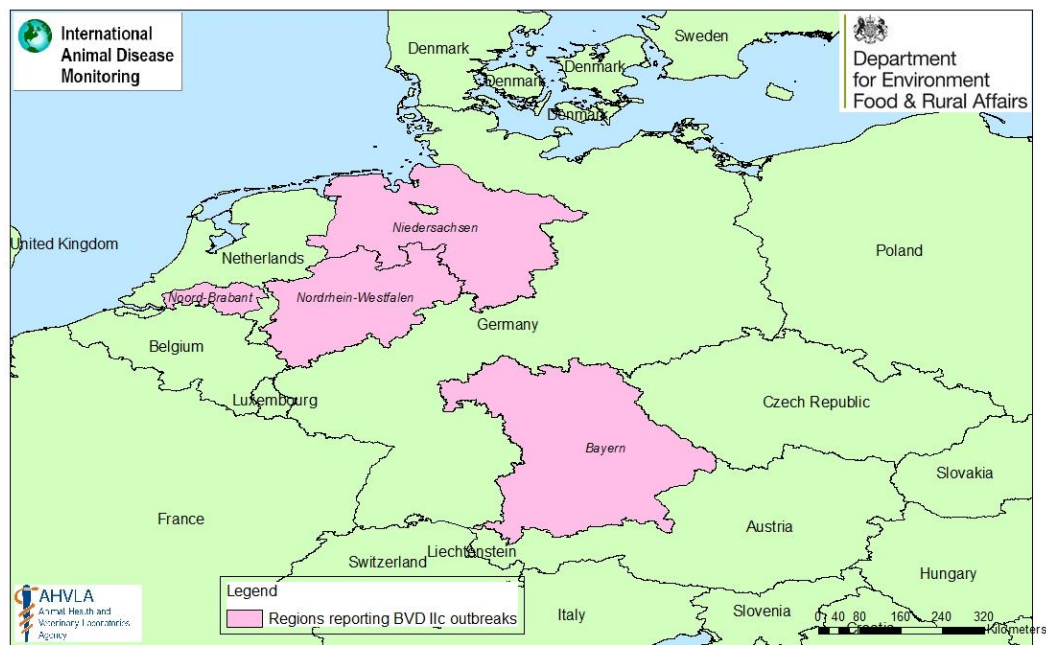
**Current situation in UK:** BVD type 2 has been detected in the UK but not for a number of years and not currently. The subtype represents a very small fraction of all BVD typed strains and is only isolated very rarely. All PCR and blood antigen ELISA tests received by AHVLA and SAC that are positive undergo type 1/2 typing. Further subtyping is not routinely undertaken, so it is unknown whether BVD type 2c is present, but standard tests will detect BVD 2c along with other BVD subtypes. Clinical signs of BVD infection are usually not strongly associated with subtype and BVD type 1 is the main cause of disease including haemorrhagic disease seen in GB. Two inactivated BVD vaccines are marketed in the UK and both provide some protection against BVD types 1 and 2. Vaccination in NL and Germany appears to be effective in preventing new cases.

The new outbreaks continue to present an unusually severe manifestation of haemorrhagic BVD with the ability to spread across geographic regions with live animal trade. Potential introduction of this subtype into the UK would not have any effect on the UK's ability to trade and BVD is not zoonotic. If it enters UK, welfare aspects and economic losses may need to be assessed depending on patterns of spread and severity in our cattle populations.

The main risk for introduction of this sub-type into UK is via import of infected cattle. UK imports cattle from both Germany and the Netherlands, mainly in-calf heifers of dairy breeds. International legislation states that all live animals for trade must be clinically healthy and originate from a farm where there are no disease restrictions in place. Mortality was high and clinical disease severe among adult cattle in the known infected German herds while herd level restrictions should also prevent the trade of any persistently infected animals. Trade information from the EU Trade Notification System (TRACES) indicates that since 1<sup>st</sup> July 2014, 175 consignments of 3,681 cattle were imported to the UK from the two affected countries, 111/175 from Netherlands, 64/175 Germany. The risk of introduction to UK from known infected herds is still considered to be very low.



The map shows the affected areas and recent consignments of cattle to the UK.



Current countries and regions where BVD Type 1c virus has been reported in dairy herds or veal calves.

Map prepared by IDM  
Actual Scale 1:9,000,000

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### Protective circumstances in GB:

- All live animals for trade in the EU must be clinically healthy and originate from a farm where there are no disease restrictions in place. This reduces the risk of importing animals from known diseased herds.
- The clinical signs in known infected herds have been very severe, so the likelihood of cases in the UK being seen and reported by private veterinary surgeons is high. All government vets have again been alerted to the threat of the new virulent BVD manifestation and will report any suspicions to the AHVLA CEG for further assessment. Any suspicion of BVD type 2c should be reported to private veterinarians.
- AHVLA CEG remains in direct contact with European Colleagues for frequent updates and further information.
- Germany is running a BVD control programme and monitors the situation carefully. They use vaccination of affected herds and pre-movement testing and the disease is notifiable.
- The only outbreaks seen in NL are in veal calf herds going directly to slaughter and only in herds importing from Germany.
- The common tests, PCR and ELISA, used in UK, detect both BVD type 1 and BVD type 2. They are expected to classify a BVD type 2c infection as a BVD positive animal though further type differentiation will only be done on request. It is unknown how many farmers currently choose to test imported animals for BVD.
- Both BVD vaccines on the market in UK provide some protection against BVD type 1 and 2 and we have no evidence that this would not include BVD type 2c.

Doll, K. & Holsteg, M. (2013) BVD virus Type 2 outbreak in Germany. [http://bvd-day2013.eu/wp-content/uploads/2013/09/26-En-Doll\\_Holsteg\\_BVDV-2-Outbreak-Germany.pdf](http://bvd-day2013.eu/wp-content/uploads/2013/09/26-En-Doll_Holsteg_BVDV-2-Outbreak-Germany.pdf) Accessed 18/08/2014