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Update on Schmallenberg virus (SBV)

Report Categories:
Pest/Disease Occurrences
Livestock and Products
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Report Highlights:
This report provides an update on the emerging livestock virus named Schmallenberg (also called SBV) in Germany. The disease causes fetal death or deformation in lambs, bovine and bison calves and goat kids. This report draws information from the German Federal Ministry of Agriculture, Food and Consumer Protection (*BMELV*). BMELV will introduce an official reporting requirement for SBV occurring in a growing number of German Federal States. In addition, the German Federal Research Institute for Animal Diseases (*Friedrich-Loeffler-Institute – FLI*) has the lead on researching the virus and developing a vaccine. FLI discovered the SBV in the German town of Schmallenberg in November 2011. 797 SBI cases of SBV have been reported in Germany. Cases are also being reported in the Netherlands, Belgium, France, England, Luxembourg and Italy. No zoonosis (transmission from animals to humans) has been reported. USDA/APHIS has placed import restrictions on some German and EU animal products but the volume of trade with Germany is not large.

General Information:

Schmallenberg Virus Update - Germany

Trade With U.S.

USDA/APHIS placed restrictions on shipments to the United States of ruminant germaplasm, bovine semen, and embryos collected after June 1, 2011 originating from the European Union. Live ruminants are as not eligible for export to the United States.

For perspective, U.S. imports of bovine semen from Germany were about $250,000 in 2011 and about $7.4 from the EU-27. Trade in sheet and goat products is negligible.
There are not yet reliable estimates of the economic damage caused by the virus to German agriculture.

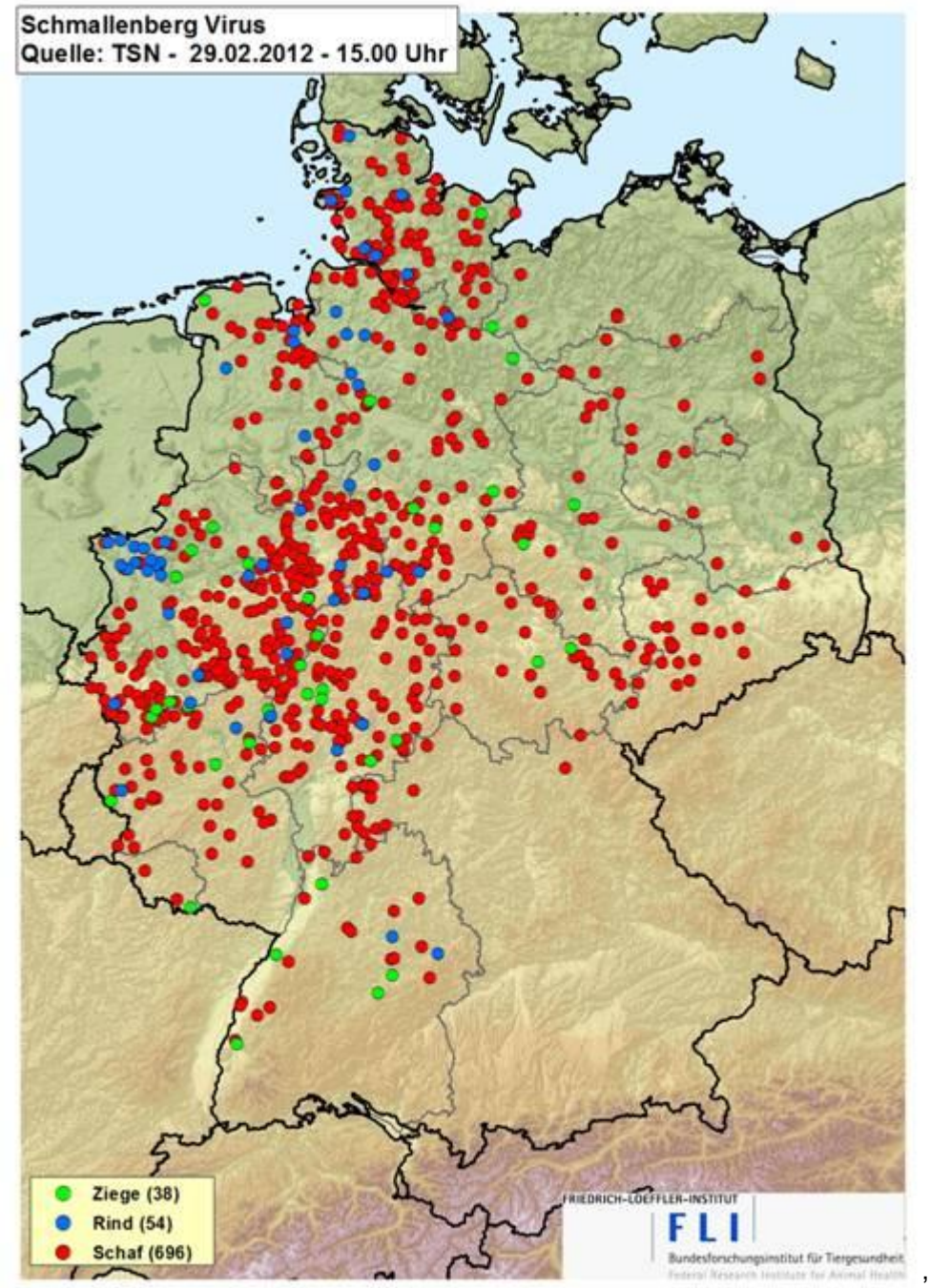
Diagnosis

Currently, there is no sensitive and validated serological test for SBV in livestock. Diagnosis is reportedly being made using nucleic acid detection test (RT-PCR).

Attachment A – Map of Schmallenberg Cases in Germany
Attachment B Extract from press release of the Federal Ministry for Agriculture, Food and Consumer Protection (BMELV), dated March 2, 2012
Attachment C Extract from press release by the Federal Research Institute for Animal Health, FLI – Friedrich Loeffler Institut, dated March 1, 2012
Attachment D – Related EU and USDA reports

Attachment A:

Map of Schmallenberg Cases in Germany



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Source: http://www.fli.bund.de/de/startseite/aktuelles/tierseuchengeschehen/schmallenberg-virus.html

Attachment B:

Extract from press release of the Federal Ministry for Agriculture, Food and Consumer Protection (BMELV), dated March 2, 2012

'Information on the "Schmallenberg Virus"

Both in Germany and in neighboring EU states, there has recently been a rise in the cases of "Schmallenberg virus". The virus has so far mainly affected sheep and goats but is now also increasingly hitting herds of cattle.

The cases to date have mainly occurred in the federal states of North Rhine-Westphalia, Lower Saxony, Hesse and Schleswig-Holstein, but other federal states have also been affected. The Netherlands, Belgium, Great Britain and France have also reported cases of the Schmallenberg virus, mostly in sheep.

Disease agent identified for the first time in November 2011

In the Netherlands in the summer of 2011, animals were observed to be suffering from a disease which was at first taken to be a new outbreak of bluetongue disease. When comparable cases were observed in Germany in late autumn, the Friedrich Loeffler Institute, Federal Research Institute for Animal Health (FLI), set to work to identify the disease agent; it was finally identified for the first time in November 2011. The virus belongs to the Simbu serogroup of the Orthobunya viruses. The pathogen is also referred to as "Schmallenberg virus" as the virus was successfully isolated for the first time in samples taken from animals from Schmallenberg (North Rhine-Westphalia). Orthobunya viruses, which are common in cattle in Australia, Asia and Africa, are transmitted via blood-sucking midges (insects).

The Schmallenberg virus can affect cattle, sheep, and goats. Adult animals display only mild symptoms. However, infections of pregnant animals may lead to delayed symptoms, namely fertility disorders, premature births and in some cases severe deformation of new-born animals. Some lambs have, for example, been born with severe deformities in Germany in recent weeks. It remains to be seen how the disease will affect calves from February onwards, i.e. during the first calvings after a possible infection last summer. Given that the FLI findings so far indicate that the virus is not transmitted from animal to animal but by midge bites, we do not expect any new infections to occur at present. The deformities in new-born animals observed so far are due to infections last year.

No health risk to humans

Based on current evidence, the Schmallenberg virus does not pose a health risk to humans. The viruses that are relevant for animals generally do not pose any risk to humans unless they are zoonotic agents. Researchers believe that, because the Schmallenberg virus is related to the Shamonda, Aino und Akabane viruses, the virus does not present a risk to humans. The European Centre for Disease Prevention and Control (ECDC) has issued a corresponding risk assessment.
Risk assessment by the European Center for Disease Prevention and Control

Development of a vaccine

The FLI is currently working at full stretch on further research on this virus, which is new in our part of the world, and on developing a vaccine. The detection method developed at the FLI has been made available to institutions in Belgium, France, England, the Netherlands, Italy and elsewhere. It remains unclear whether this exotic virus has been newly introduced or whether Orthobunya viruses have been present in ruminants in Europe for some time. It is therefore necessary to conduct additional research to further assess this virus detection.

Orthobunya viruses in cattle are common in Australia, Asia and Africa where they usually cause very mild diseases at first. However, infections of pregnant animals may cause delayed symptoms, namely congenital deformation, in some cases very severe, as well as premature births and fertility disorders. Viruses similar to akabane are primarily transmitted by blood-sucking midges.

Introduction of a reporting requirement

The Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) will introduce an official reporting requirement for this animal disease now that the "Schmallenberg virus" is occurring in a growing number of Länder. The Bundesrat (Upper House of Parliament) will decide on the necessary amendment of the Ordinance on Notifiable Animal Diseases at the end of March. The reporting obligation will then be able to officially come into force. The reporting requirement makes it compulsory for the heads of inspection authorities to report all diagnosed cases. This enables veterinary authorities to obtain a comprehensive overview of the epidemiological situation , to monitor the spread and to take control measures.

In anticipation of the new legal basis, the Federal Government and Länder have agreed that the reporting requirement should de facto be effective immediately. In practice, this means that all new cases are immediately reported via the German animal disease notification system (TNS) of the Länder and their authorities. This is an unbureaucratic, fast and tried-and-tested reporting procedure. It means that the authorities are already able to get a daily picture of the current situation. The FLI is publishing the new figures daily on its website.
At the last EU Agriculture Council, the BMELV advocated also introducing a reporting requirement at EU level as new cases are being detected in other European countries as well. The Commission has promised to examine this matter accordingly. Germany and the Netherlands will continue to work towards promoting research activities on diagnosis and vaccination at European level.

Further information

Up-to-date information on the "Schmallenberg virus", answers to frequently asked questions and up-to-date maps depicting the spread of the virus in Germany are available on the website of the Friedrich Loeffler Institute.
Friedrich Loeffler Institute - Current Information on 'Schmallenberg virus' '

Source:
http://www.bmelv.de/SharedDocs/Standardartikel/Landwirtschaft/Tier/Tiergesundheit/SonstigeKrankheiten/Schmallenberg-Virus.html

Attachment C:

Extract from press release by the Federal Research Institute for Animal Health, FLI – Friedrich Loeffler Institut, dated March 1, 2012

'Current Information on 'Schmallenberg virus'

In Germany animals from 797 holdings tested positiv for 'Schmallenberg virus' so far. The cases occurred in 58 cattle holdings, 701 sheep holdings and 38 goat holdings.
The Netherlands, Belgium, the United Kingdom, France, Italy and Luxembourg have also reported cases of 'Schmallenberg virus', mostly in sheep.

Table: Confirmed case numbers on the stocks concerned, March 1, 2012				
Federal state	Cattle	Sheep	Goat	**Total**
Schleswig-Holstein	7	87	1	**95**
Hamburg	1	5		**6**
Lower Saxony	12	110	6	**128**
North Rhine-Westphalia	28	243	11	**282**
Hesse	3	94	5	**102**
Rhineland-Palatinate	5 (1 Bison)	36	4	**45**
Baden-Wuerttemberg	2	16	5	**23**
Bavaria		14		**14**
Saarland		2	1	**3**
Berlin		1		**1**
Brandenburg		18		**18**
Mecklenburg-Western Pomerania		5	1	**6**
Saxony		25		**25**
Saxony Anhalt		20	2	**22**
Thuringia		25	2	**27**
Total	**58**	**701**	**38**	**797**

Source: Animal Disease Reporting System (*Tierseuchen Nachrichten System – TSN*)

In November 2011, the FLI first detected a virus of the genus Orthobunyavirus in cattle in Germany. Comparative analyses of the genetic material lead to the assumption that the virus

belongs to the Simbu serogroup (Shamonda, Aina, Akabane viruses). The virus could be isolated, cultivated and replicated. Based on the geographic origin of the sample, the virus was provisionally named 'Schmallenberg virus'.

FLI developed a detection method that has been made available to institutions in Belgium, France, England, the Netherlands, Italy and in Switzerland.

It is still unclear whether this exotic virus has been newly introduced or whether orthobunyaviruses already have been present in ruminants in Europe for some time. Therefore, further investigations are necessary to assess this virus detection.

Orthobunyaviruses of cattle are widely distributed in Oceania, Australia and Africa and, as a rule, initially cause very mild clinical symptoms. If pregnant animals are infected, however, temporarily delayed, sometimes considerable congenital damages, premature births and reproductive disorders may occur. Akabane-like viruses are mainly transmitted by biting midges. These viruses which are relevant in cattle do not represent a risk for humans. They are no zoonotic agents. Due to the relationship of 'Schmallenberg virus' with Shamonda, Aino, and Akabane virus, a risk for humans is not to be expected (also see risk assessment of the European Center for Disease Prevention and Control)
Risk assessment of the European Center for Disease Prevention and Control

Attachment D:

Related EU and USDA reports.

Related EU Reports:

Additional information may be found on the EU web site:

http://ec.europa.eu/food/animal/diseases/schmallenberg_virus/index_en.htm

Related USDA reports:

Report		Title	Date released
NL2003	Netherlands	Schmallenberg Virus Found in Cattle	1/30/2012