



Hybu Cig Cymru – Meat Promotion Wales

Implications of Bluetongue in the UK on the Welsh Livestock Sector

Executive Summary

February 2008

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EXECUTIVE SUMMARY

This paper investigates the implications of Bluetongue in the UK on the Welsh livestock sector. It is presented in three parts

Part 1 examines the science of Bluetongue, the experience of its spread in northern Europe and the UK, disease transmission and prevention and control measures.

Part 2 examines the impact of the disease at the on-farm level.

Part 3 assesses the wider potential economic cost to the Welsh livestock sector on the basis of a range of assumptions and under three scenarios of disease spread.

Bluetongue - The Science, Experience and Control Strategies

Bluetongue is a non-contagious, insect-transmitted, viral disease of domestic and wild ruminants. It is not known to affect humans. Transmission takes place via bites of certain species of *Culicoides* midges, which are biological vectors. It is noncontagious, not being transmitted by direct or indirect contact between animals in the absence of the insects. Contamination of the physical environment does not therefore represent a significant risk.

The disease is characterised by inflammation of the mucous membranes, congestion, swelling and haemorrhages. Sheep are generally the worst affected, while cattle and goats may not show any clinical signs of disease and can carry the virus for a certain period of time and transmit it to other ruminants.

The clinical signs are quite variable and depend upon the virulence of the virus strain and the species of animal infected. Sheep can have high mortality rates of up to 30% whilst cattle are often only sub-clinically affected and only about 5% of cattle will develop clinical signs.

The presence of Bluetongue was detected by laboratory tests on a premises in Suffolk on 22 September 2007. On 28 September Defra confirmed that Bluetongue disease was circulating in East Anglia. The large Protection zone established in England, in the East and South East of the country was extended in 2008 following detection of infected animals in 2008 as a result of the pre-movement testing required in the vector-free period. The Surveillance Zone extended along the border of Wales except in the north.

As a result of a new Protection Zone covering all of Dorset and the New Forest, the Welsh Assembly Government declared a Restricted Zone in South East Wales on 13 February. An imported sheep has also tested positive for

Bluetongue in Llandysul, Ceredigion following routine post import testing. This was an isolated incident from an imported animal and it has not been confirmed that the disease is circulating in Wales.

The winter period provides a vital opportunity in which to review the disease situation and the control strategy for 2008. Disease surveillance work is therefore being undertaken to evaluate the full extent of disease spread in 2007, alongside data from reports of disease from farmers.

There is no treatment for bluetongue. Prevention may be possible by vaccination (but only if a vaccine of the appropriate serotype is available) and by controlling midge populations (with insecticides or, where practical, by control of breeding sites), but neither is totally successful. Defra have ordered 22.5 million doses of vaccine with 2.5 million of this reserved for Welsh Assembly Government. The order will ensure that vaccine will be available in late May-June 2008 to control the impact of Bluetongue and ease movement restrictions on vaccinated animals. Livestock keepers will be offered the opportunity to purchase vaccine from the vaccine bank.

The Impact at the On-Farm Level

The impact of bluetongue at an individual farm level is significant, especially in relation to reduced performance and loss of value of the animals. The cost of the disease during the possible infection period (autumn 2008) can vary between about £10 to £42 per breeding cow and £9 to £43 per breeding ewe depending on the infection rate. The impact of the disease on performance in the following breeding season (spring 2009) might vary between about £5 to £19 per breeding cow and £3 to £16 per breeding ewe depending on the infection rate. It is likely that when the cost of movement restrictions are added, the cost of bluetongue infection per breeding female would be greater than £100.

Some of these costs are outlined in greater detail in the Appendix.

The Potential Economic Impact on Wales

With its agricultural economy heavily dependent on ruminant livestock production, Wales could be seriously affected by a Bluetongue outbreak, especially if this were to become established over time.

The calculation of potential economic losses is very difficult and can only be based on a wide range of assumptions, which need to be reviewed and updated in the light of knowledge and experience. The key impacts are:

- Direct losses - arising from mortality and morbidity (leading to weight loss, reduced milk yield, fertility problems, abortions and foetal abnormalities), as well as veterinary costs in both cattle and sheep. The key direct losses are: the value of lost animals and the cost of their disposal, the reduced value of infected animals that survive, and the cost of treatment and additional care of infected animals. Direct losses are higher in relation to sheep than to cattle.

- Indirect losses - due to movement restrictions that reduce the value of animals, export restrictions and other costs, many of which are very difficult to quantify.

The paper investigates these potential losses in 2008 only, under the following three scenarios:

- Scenario 1 - no Bluetongue disease in Wales in 2008
- Scenario 2 - the late arrival of Bluetongue in Wales in 2008
- Scenario 3 - the early arrival of Bluetongue in Wales in 2008

The overall potential losses under these scenarios are summarised in the table below.

Scenario	Direct Losses £ million	Indirect Losses £ million	Total Losses £ million
1 No Bluetongue	0.0	5.3	5.3
2. Late arrival	1.2	7.1	8.3
3. Early arrival	22.4	5.5	27.9

The analysis only looks at losses at the primary production level. But it is also possible that others in the meat supply chain would suffer losses; the throughputs of live markets, abattoirs, cutting plants, wholesalers, exporters and retailers could be affected. Trade in live animals might also be disrupted. Tighter disease control measures might increase overall operational costs.

The reaction of the supply chain to the new situation is difficult to assess, though possible disruptions to supplies of slaughter animals could well have an impact on farmgate prices.

It is likely that Bluetongue will reach Wales in 2008 and this would result in significant cost to the Welsh industry. It is vital that the industry is prepared for this by considering strategies for limiting the impact of the disease in advance of its arrival.