

European BSE surveillance program since January 2001: current trends

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Abstract

Annual BSE incidence data for long have been based on clinical suspect reporting. In the current EU BSE surveillance program, between Jan. 2001 and Dec. 2002 over 18 Million adult cows were tested and over 1'900 BSE cases detected (excluding UK). 24% of the adult cattle population per year was slaughtered "healthy", and 2.5% was tested as "risk animals". 26% of all cases originated from clinical suspect reporting, 45% from risk animals, and 29% from healthy-slaughtered cattle. Some countries show a significant decline in monthly disease prevalence. Ongoing targeted surveillance is needed to monitor the effectiveness of the preventive measures.

Introduction

Based All OIE members states have to report BSE cases to the OIE office in Paris, and a database on reported cases is maintained and published there (www.oie.int). Crude annual incidence data show different BSE annual incidences for the European countries over time, with a recent increase in several countries (Figure 1).

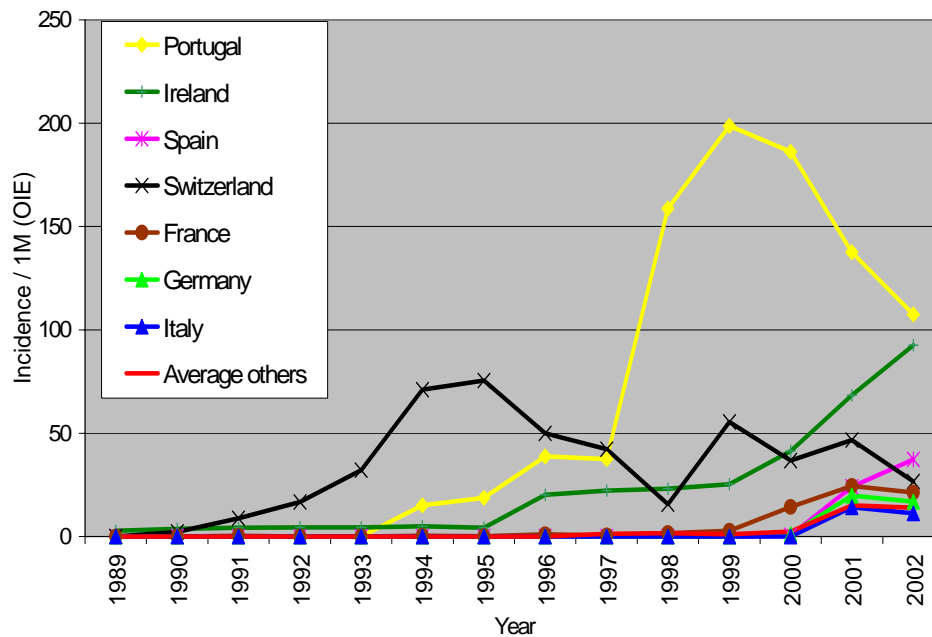


Figure 1 – BSE crude annual incidence (in cases per 1 Million adult living cattle) by selected European countries (excluding the United Kingdom) based on the number of cases reported to the OIE

Based on evidence that baseline surveillance (mandatory reporting of clinical suspect cases, the main source of BSE data until Dec. 2000) is insufficient to correctly assess the BSE situation of a given country or region, and after the validation of three rapid

screening tests for post-mortem diagnosis of BSE in cattle in 2000, the European Union (EU) in January of 2001 launched a mandatory targeted BSE screening program. This program, after an implementation phase and subsequent adaptations in July 2001, has been in operation since, and monthly surveillance results by member state and target population are published on the EU website (http://europe.eu.int/comm/food/fs/bse/index_en.html).

Within the EU member states (excluding the UK) approx. 35.5 Million cattle over 24 months of age are held. Of those, between January 1, 2001 and Dec. 31, 2002, a total of 4'121 clinical BSE suspects, 1.7 Million risk animals (emergency slaughter, fallen stock) and 16.6 Million adult healthy-slaughtered cattle were tested with one of the three rapid BSE tests. In total, 1'938 BSE cases were detected and subsequently confirmed by other methods (in most instances immunohistochemistry for PrP) in these target populations.

Overall, 26% of all detected cases originated from baseline surveillance (clinical suspect reporting), 45% from risk animals, and 29% from healthy-slaughtered cattle. There, however, was considerable variation between the two years, and even more between countries. This indicates that the criteria to definite clinical BSE suspicion, sick and healthy slaughter are applied differently in the member states and might vary over time.

Almost 24% of the adult cattle population per year was slaughtered as healthy cattle and tested for BSE, and 2.5% of the population was tested as risk animals (emergency-slaughtered cows and fallen stock). Again, there was considerable variation in these proportions between countries. (Figures 2 and 3).

Some member states since July 2001 already show a significantly declining monthly prevalence in one or more of the target populations (France, Ireland, Italy) while for other member states such trends are not yet detectable. The United Kingdom (UK) was excluded from these trend analyses since disease levels and the surveillance approach were not comparable to the continental European countries.

A continuing and comparable surveillance system for BSE will be needed to reliably assess whether cases numbers are decreasing as a result of the preventive measures that have been implemented in Europe.

References

European Community website on TSE surveillance 2002 and 2003 (http://europe.eu.int/comm/food/fs/bse/index_en.html).

OIE website on reported BSE cases 2002 and 2003 (http://www.oie.int/eng/info/en_esb.htm)

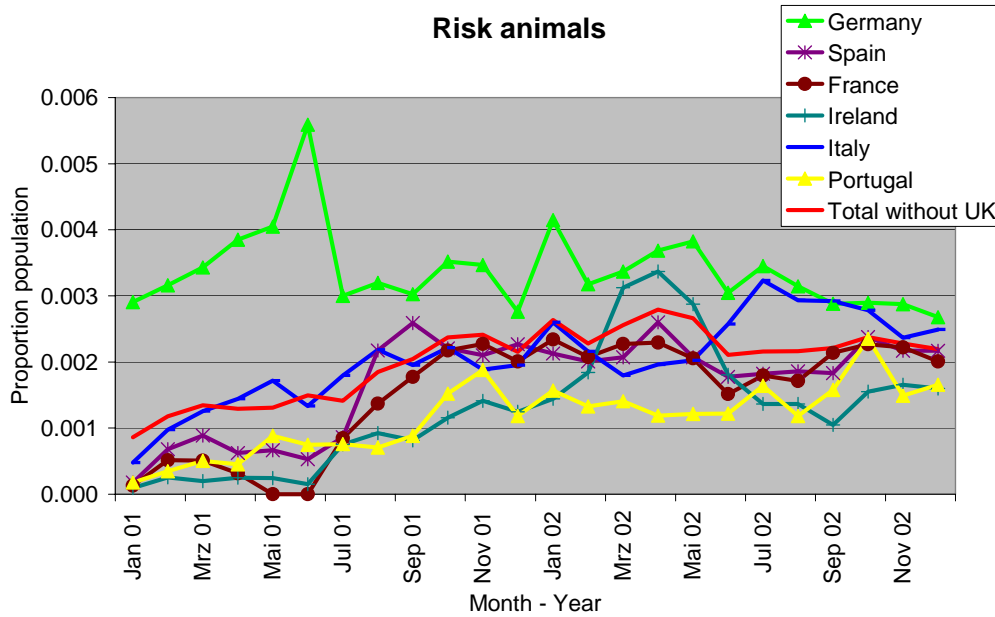


Figure 2 – Trends in the proportion of the total adult cattle population that left the countries national herd per month as BSE risk animals (http://europe.eu.int/comm/food/fs/bse/index_en.html).

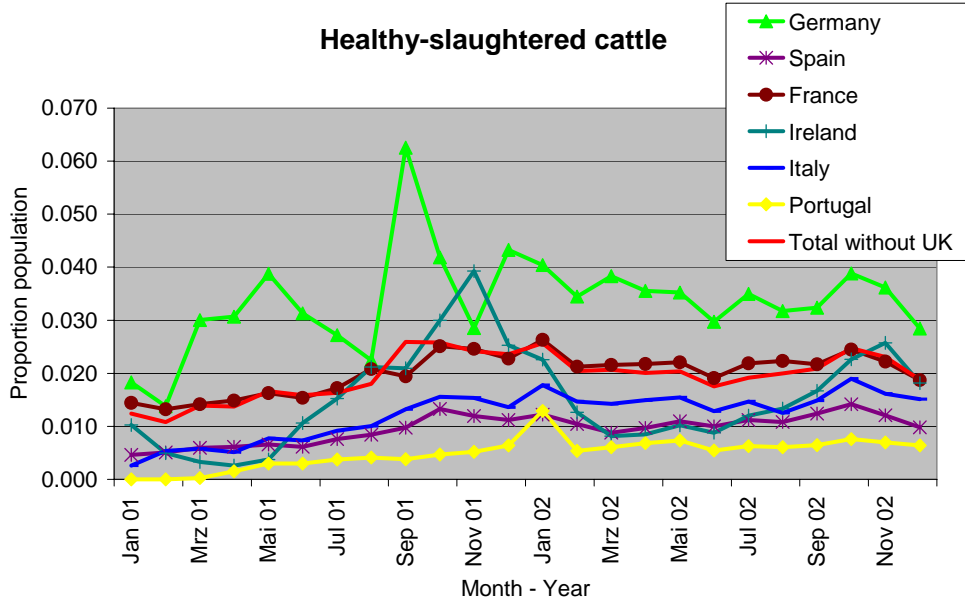


Figure 3 – Trends in the proportion of the total adult cattle population that left the countries national herd per month for healthy (routine) slaughter (http://europe.eu.int/comm/food/fs/bse/index_en.html).