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Estimating of impact of bluetongue (BTV8) infection on dairy cattle on milk production and quality under european conditions.

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Bluetongue (BTV8) appears unpredictably in Northern Europe in 2006. Even if its impact on sheep was well documented in the past, its effect on cattle and especially in dairy cattle was poorly described.

To assess the impact of Bluetongue epizootic in dairy cattle, three different methods have been developed : analysis of national databases, field survey in infected farms (North-east France), and economic estimation.

The national database results showed a variability in mortality rate (0 -16,5%). Newborn calves fatality was 22% higher in infected farms than in infection-free farms. In adult cattle this risk was also higher (+35%). On basis of a field investigation, case fatality was about 3,7% in cows and 12,5% in calves. Morbidity rate varied markedly among herds (0 to 100%), even if it was more substantial in adults. With regard to milk yield, results showed a temporary decrease in 69% of farms. In infected cows, it was estimated from 8 to 60% during the 2 or 3 weeks period following infection before returning progressively to normal. At herd level, 22% of farmers confirmed a decrease in milk production about 11% comparing to previous year but it was difficult to attribute to a single effect of BTV. At national level, this effect was not significant. In addition to those direct effects, some consequences like reproduction, trade restrictions, more labor... were difficult to quantify. Globally, economical effects resulted in a decrease of the gross margin between 1% and 8%.

About milk quality (SCC, protein...), results did not indicate significant impact on mean of SCC at herd level and protein level remained around 31-33g/l. This might be explained by lack on individual cow data.

This study showed through several approaches, that BTV infection had an significant impact on dairy farms. However, those preliminary results should be completed to assess more specifically the effects on milk quality.