

Vaccination of Swiss cattle against BTV8: is there an influence on somatic cell count and reproductive parameters?

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The occurrence of Bluetongue Virus Serotype 8 (BTV8) in Northwestern Europe in 2006 and its rapid spread within Europe resulted in the decision of various European countries to launch an either voluntary or mandatory vaccination campaign for cattle, sheep and goats. In Switzerland, early in 2008 the decision was taken to vaccinate all cattle, sheep and goats as early as vaccines could be made available by the industry. The mandatory vaccinations were carried out in summer and fall of 2008 using three available inactivated BTV8 vaccines.

The Swiss veterinary authorities, in parallel to the field vaccination program, launched several research projects on including one study on assessing the potential effect of the vaccination on dairy production and reproduction parameters at the population level. In the context of that project, milk production data including bulk milk somatic cell count measurements for the periods 2007 and 2008 were provided by two central laboratories (Qualitas AG, Suiselab AG). Reproduction data including lactation number, calving and subsequent insemination dates were made available by the Swiss Cattle Breeding Association. In a first analysis, relevant data during two periods in 2007 (spring and summer) were compared with the same periods in 2008, where the second (summer) period in 2008 covered the time of the field vaccination. In both years distinct differences in somatic cell counts as well as various reproduction parameters (time between calving and first resp. last recorded insemination, number of attempted inseminations, 56-day non return rate) could be seen between summer and spring period. So far there was not evidence that these parameters were significantly elevated at the population level during the vaccination period in summer 2008. Currently, exact vaccination dates for farms and cows are extracted from the central animal register and will be merged with the existing dairy production and reproduction data sets. Subsequently, the above described analysis will be repeated with exact vaccination status as a possible main effect while taking additional parameters into account, however, we do not expect those results to be very different from the current preliminary conclusions. This indicates that there is no measurable BTV8 vaccination-related negative effect at the cattle population level.