Prevalence of *Salmonella* Dublin antibody positive Swedish dairy herds

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Aim

To investigate the prevalence of Swedish dairy herds antibody positive for *Salmonella* Dublin

Material and Methods

Bulk milk samples were randomly selected from samples collected in the national bi-annual bulk milk sampling. A total of 6786 samples were available for the selection, and approximately every 6th sample were gathered for this study.

A total of 1072 samples were shipped to the National Veterinary Institute in Denmark for analysis using an O antigen (O:1, 9, 12) enzyme-linked immunosorbent assay (ELISA). The ELISA was performed according to the methods of Hoorfar et al.(1995).

A herd were considered positive if the corrected optic-density (ODC)% was ≥ 55. The specificity of the test were calculated assuming a disease-free status in Sweden.

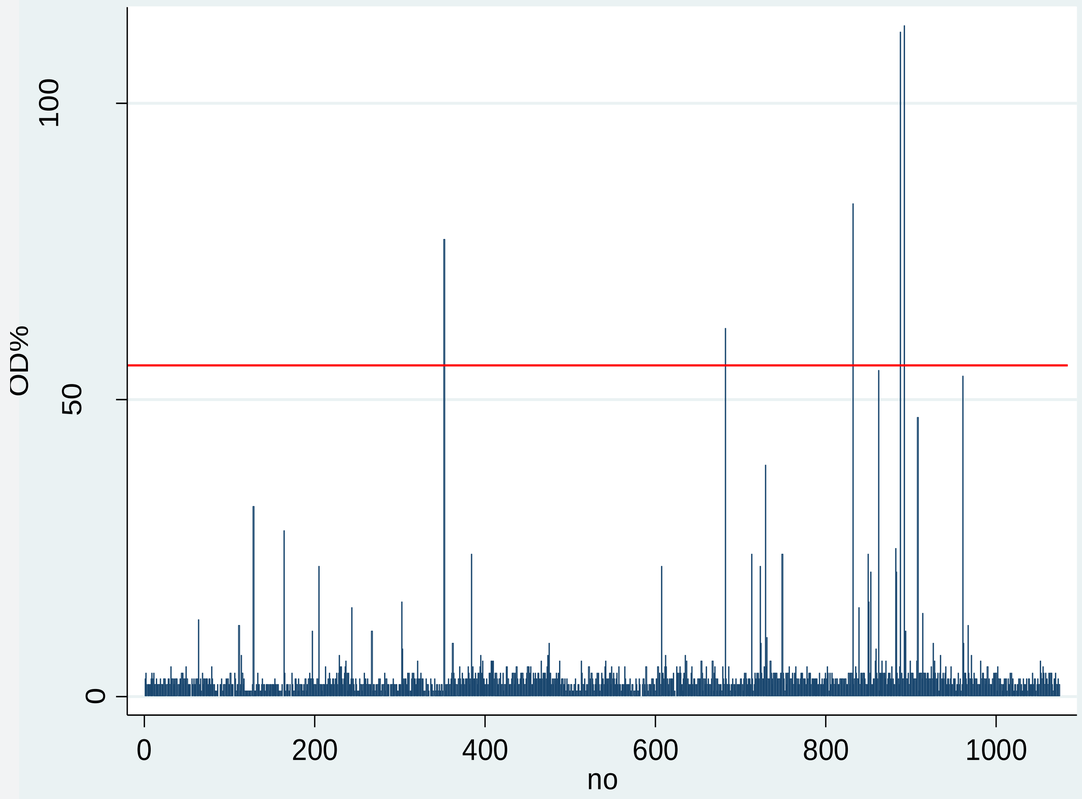

Figure 1. Distribution of the O antigen ELISA response in 1072 bulk tank milk samples from Swedish dairy herds.

Conclusion

The prevalence of *Salmonella* Dublin in Swedish dairy herds is low.

Results & Discussion

Descriptive statistics of the bulk tank milk ELISA response against *Salmonella* (*S.)* Dublin are presented in table 1. The distribution of the samples are shown in figure 1.

There were 6 bulk tank milk samples with an ODC% ≥ 55. However, the test cross reacts with other *Salmonella* serotypes, most commonly *S.* Typhimurium, hence, some of the positive samples could be due to S. Thypimurium. Considering this, the apparent prevalence of *S.* Dublin in Sweden was ≤ 0.6% using this ELISA and cut-offs recommended.

The specificity of the test assuming a disease-free status was 99.4%.

Table1. Descriptive statistics of bulk tank milk O antigen ELISA response

	Bulk tank milk ELISA response (ODC%)
Minimum	0
Q1	2
Median	3
Q3	4
Maximum	113
Mean (95%CI)	3.69 (3.26 – 4.12)

Reference

Hoorfar, J., P. Lind and V. Bitsch. 1995. Evaluation of an O Antigen Enzyme-Linked Immunosorbent Assay for Screening of Milk Samples for *Salmonella dublin* Infection in Dairy Herds. Can J Vet Res, 59: 142-148.

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