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MATE ZORIC, MARIA PERSSON, ELISABETH BAGGE, PER WALLGREN AND HELENA ERIKSSON
DEPARTMENT OF ANIMAL HEALTH AND ANTIMICROBIAL STRATEGIES,
NATIONAL VETERINARY INSTITUTE, SVA,
751 89 UPPSALA, SWEDEN

Erysipelothrix Strains Isolated from Tonsils of Fattening Pigs in Sweden

Photo: Bengt Ekberg/SVA

CONCLUSION

Our study indicates a low risk for fatteners in indoor rearing systems to be carriers of *Erysipelothrix rhusiopathiae*.

INTRODUCTION

Erysipelothrix rhusiopathiae (ER) may cause erysipelas. Up to 50% of pigs have been reported to be subclinical carriers of the bacterium in their tonsils constituting a possible source of infection. The aim of this study was to estimate the incidence of ER in the tonsils of pigs in Sweden.

RESULTS

ER was isolated from six of 200 tonsils (3%); None from 7 abattoirs (n=108), 3/60 in D (5%), 2/12 in E (17%) and 1/20 in I (5%) (Table 1). All ER-isolates were from southern Sweden with a mean distance from the herd to the abattoir of 235±99 km (range 111-377 km).

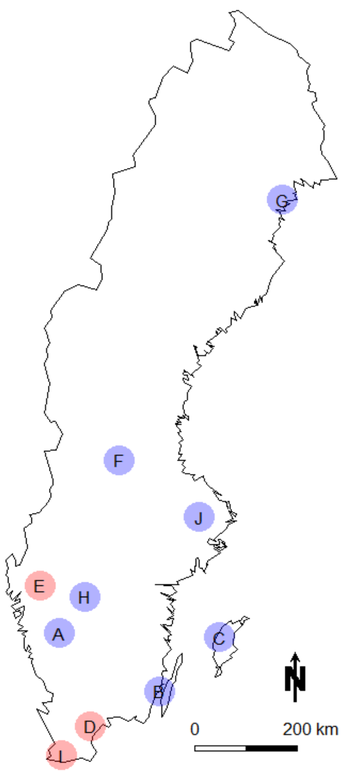


Table 1. Tonsils were collected from 200 apparently healthy pigs at slaughter from 10 abattoirs in Sweden

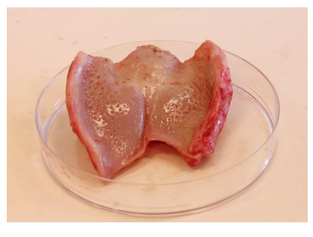
Abattoirs	Tonsils (n)	ER-isolates (n)	Positive (%)
A	26	0	0
B	36	0	0
C	6	0	0
D	60	3	5
E	12	2	17
F	6	0	0
G	4	0	0
H	26	0	0
I	20	1	5
J	4	0	0

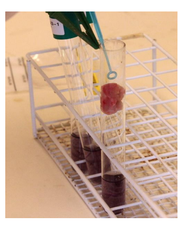
DISCUSSION

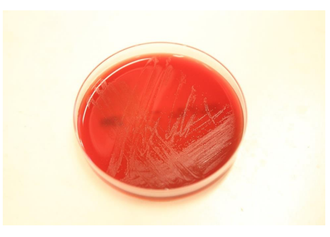
In contrast to previously reported results, our study indicate a low risk (3%) for fatteners to be carriers of ER. The results obtained suggest that indoor rearing of fatteners combined with vaccination of sows, hygiene and limited access to straw prevent colonization of ER, which is further supported by the fact that erysipelas is rarely diagnosed.

Photo: Bengt Ekberg/SVA

Photo: Annika Karlsson/SVA







MATERIAL

Tonsils were collected from 200 apparently healthy pigs at slaughter in 2017, 100 in spring and 100 in autumn, from 10 abattoirs slaughtering 88% of the pigs in Sweden. The sample size per abattoir was based on the number of pigs slaughtered during 2016. Only one pig per herd was sampled.

METHODS

Tonsil tissue (about 1 x 1 cm) was inoculated in 5 ml broth with 0.2 mg/ml sodium azide and 5 µg/ml crystal violet at 37°C for 48 h. Approximately 10 µl of the broth was spread on horse blood agar plates containing 400 µg/ml kanamycin and 50 µg/ml neomycin and incubated at 37°C for 48 h. Growth of ER was confirmed by colony morphology and MALDI-TOF MS.

mate.zoric@sva.se
www.sva.se

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