

Effect of removal of antibiotics from the diet on welfare and health indicators of weaner pigs

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Introduction

- Overreliance on medication to prevent illnesses in animal production (De Bryine *et al.*, 2014)

Practice no longer sustainable



concern for human health

dangerous consequences
for livestock

lack of effective
medication to
treat illnesses

Risk of antibiotic resistance (ABR)

Introduction

- High antibiotic (AB) use in pig production (Burch, 2012)
- AB often seen as the only solution for disease problems in weaned pigs (Bengtsson & Greko, 2014)

Weaning = major stressor
(health and welfare challenges)



In-feed administration most common
route (Callens *et al.*, 2012)

Aim

To quantify the effects on skin lesions related to welfare and health indicators of weaner pigs of removing AB from the feed and replacing with targeted parenteral AB treatments




Material & Methods



weighed

70 pigs sorted into 2 groups of 35 weaners with similar body weight (BW: $10.6 \pm 0.7\text{kg}$)

6 weeks  6 replicates



tagged

Total of 420 pigs



Sulfadiazine-Trimethoprim
14.4 mg/Kg BW

6 AB




6 NO

Material & Methods



weighed

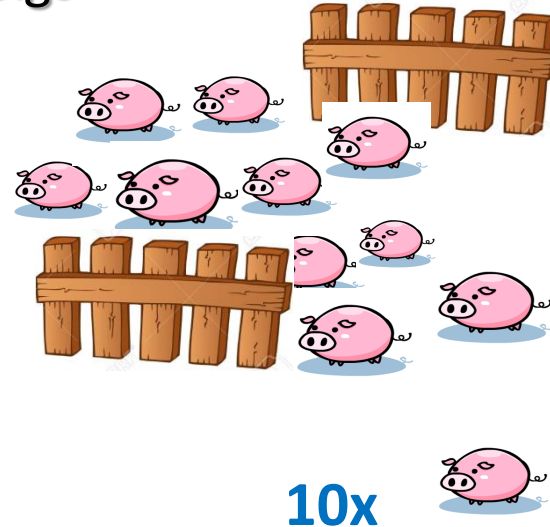
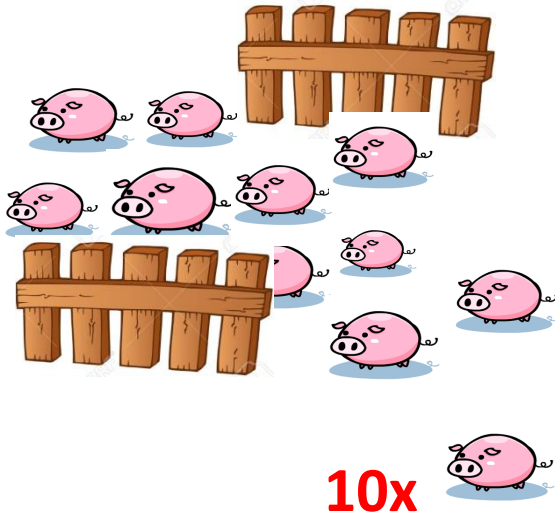
70 pigs sorted into 2 groups of 35 weaners with similar body weight (BW: 10.6 ± 0.7 kg)

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tagged

Total of 420 pigs



Material & Methods



after 4 weeks and 4 days

- ✓ moved into 2nd stage
- ✓ each group split into 2 pens (5 focal pigs/pen)

Weekly recording



Group level

Health deviations (HD)

- ✓ Hernia, scouring, pumping, ear and tail wounds, neurological disorders etc.
- ✓ No. coughs (COU) and sneezes (SN) per 5 min period

Focal pig level

Body, tail, ear and flank lesions

Material & Methods

Welfare lesions



**Body lesions
(0-6 at 11 locations)**



**Tail lesions
(0-5)**



**Ear lesions
(0-3)**

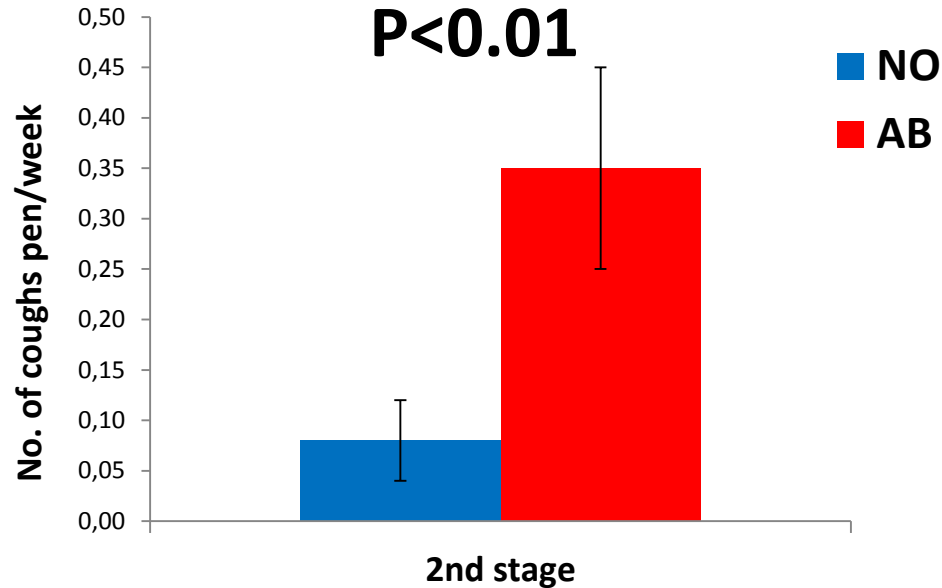


**Flank lesions
(0-3)**

Data were analysed using SAS 9.3

Results

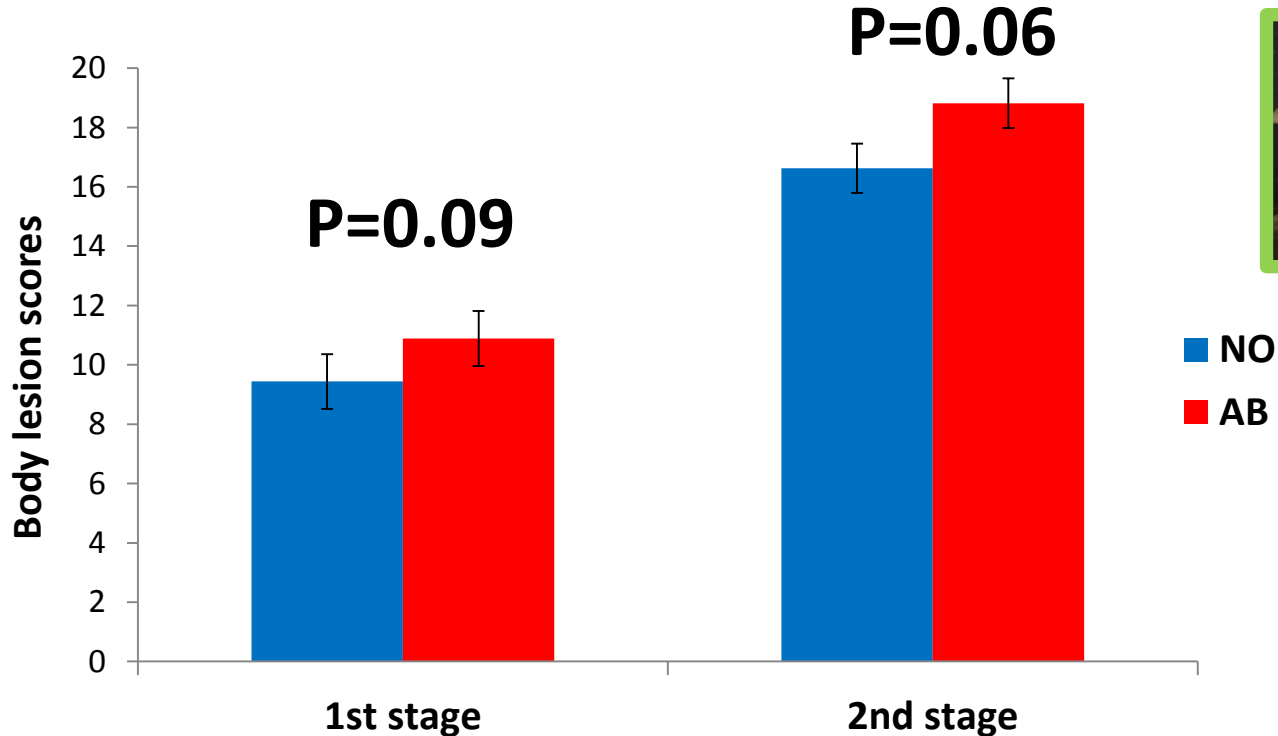
Number of coughs/pen/week in 2nd stage weaners with (AB) and without (NO) in-feed antibiotics



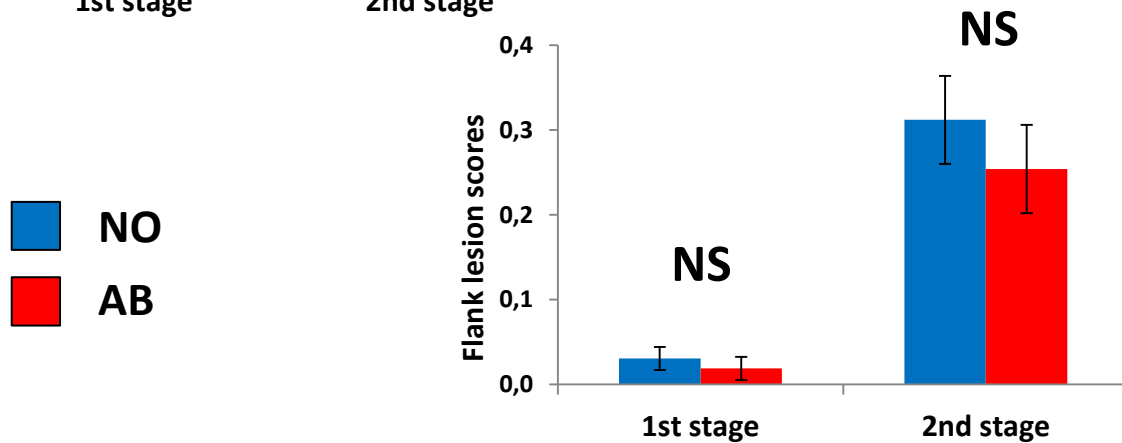
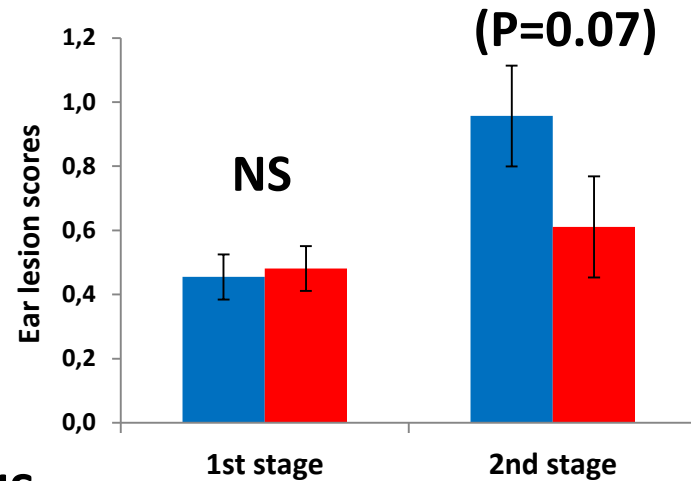
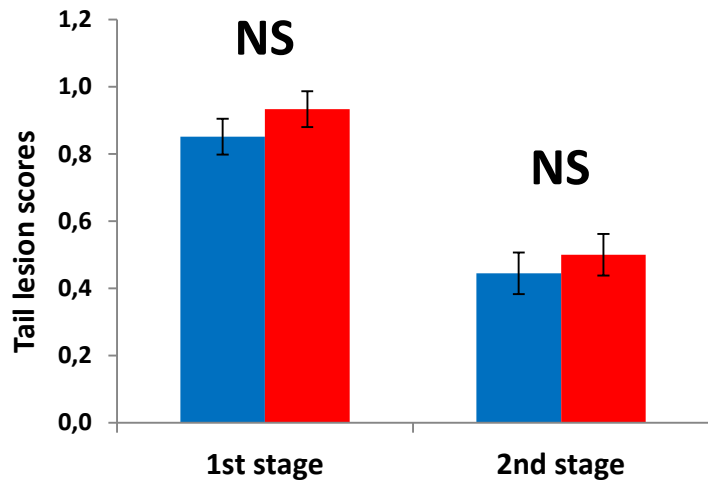
COU 1st stage SN 1st and 2nd stage HD 1st and 2nd stage

NS

Influence of in-feed antibiotics (AB) or no in-feed antibiotics (NO) on body lesion scores




Tail, ear and flank lesion scores





Discussion

1. Pigs with AB in their feed = Coughing  in 2nd stage - ?

2. Pigs without AB in their feed =  Body lesions



 reduced growth rates

 reduced aggressive behaviours

reduced competition for food?

Conclusion

Removal of in-feed antibiotics from the diets of weaner pigs had minimal effects on indicators of health and welfare



Acknowledgements



Thanks to the farmer
and his staff

**Thanks for
your attention**

