

Effect of removing antibiotics from the diet of weaner pigs on ear biting behaviour and ear lesions



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Antibiotics in pig feed

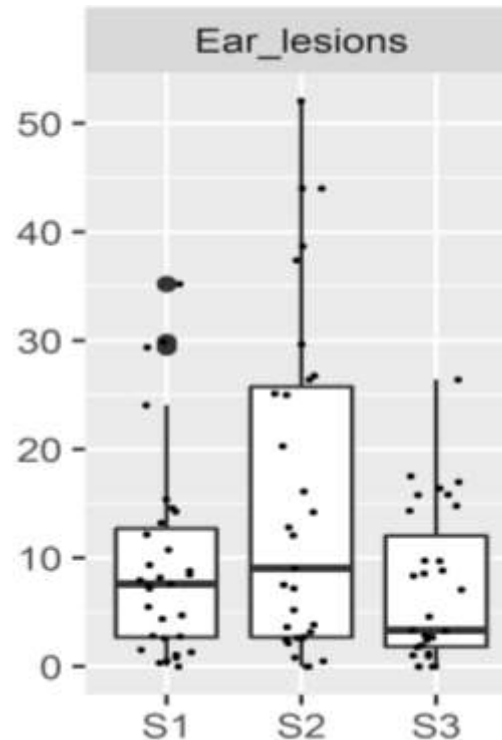


- Antibiotics (AB) used therapeutically and prophylactically to control infectious diseases in intensive pig production
- Implicated in antibiotic resistance
- Banned as growth promoters in the EU but prophylactic use in-feed is now under review
- Need for more targeted approaches to dealing with disease challenges
- Perception amongst farmers that in providing AB 'in-feed' they are protecting pig welfare (*Diana et al., ISAE 2016*)



Aim

Evaluate the effect of removing prophylactic in-feed AB (and replacing with targeted parenteral AB treatments) on pig performance, welfare and behaviour from weaning to slaughter



Materials and methods

- 6 wk period - 420 pigs on a commercial farm weaned (28 ± 2 days of age), tagged and sorted into 2 groups of 35 pigs (10.6 ± 0.7 kg) for 9 wks



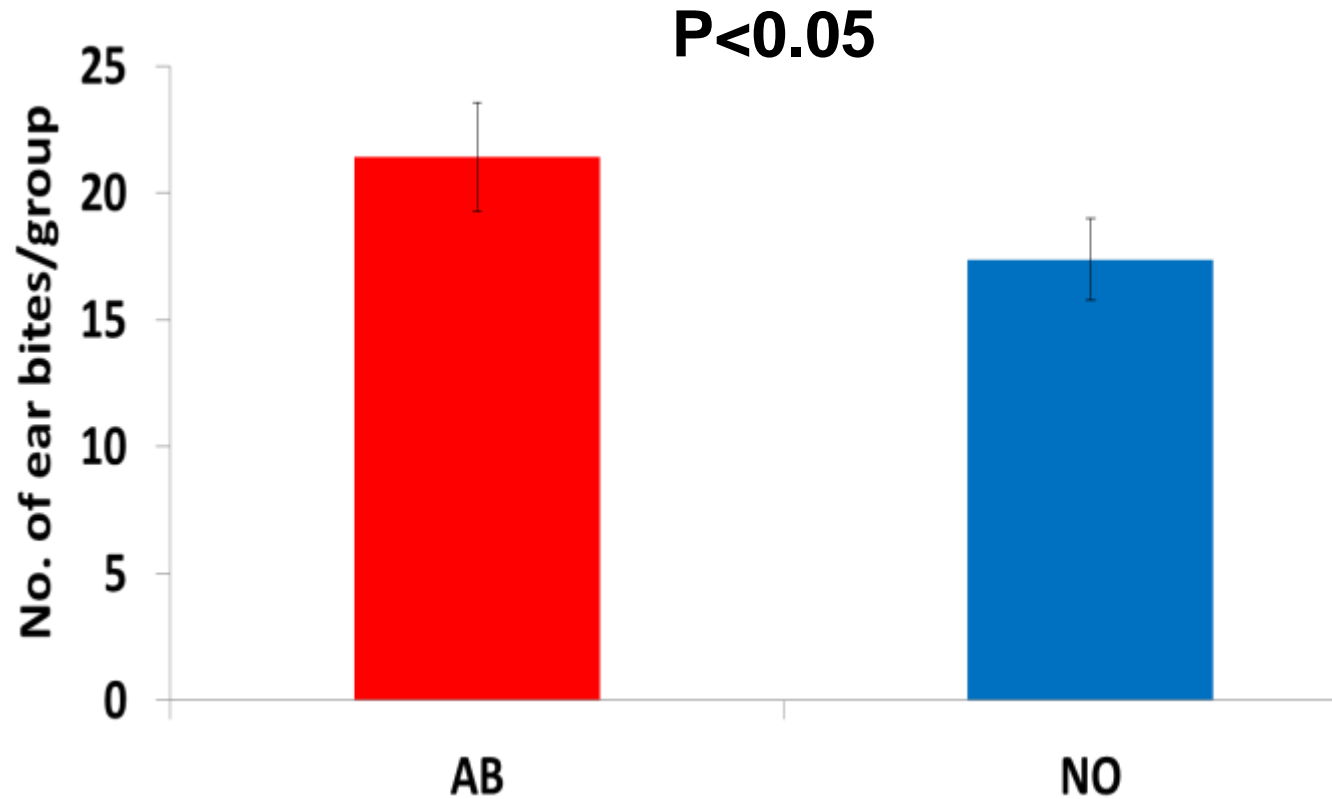
AB (n=6)



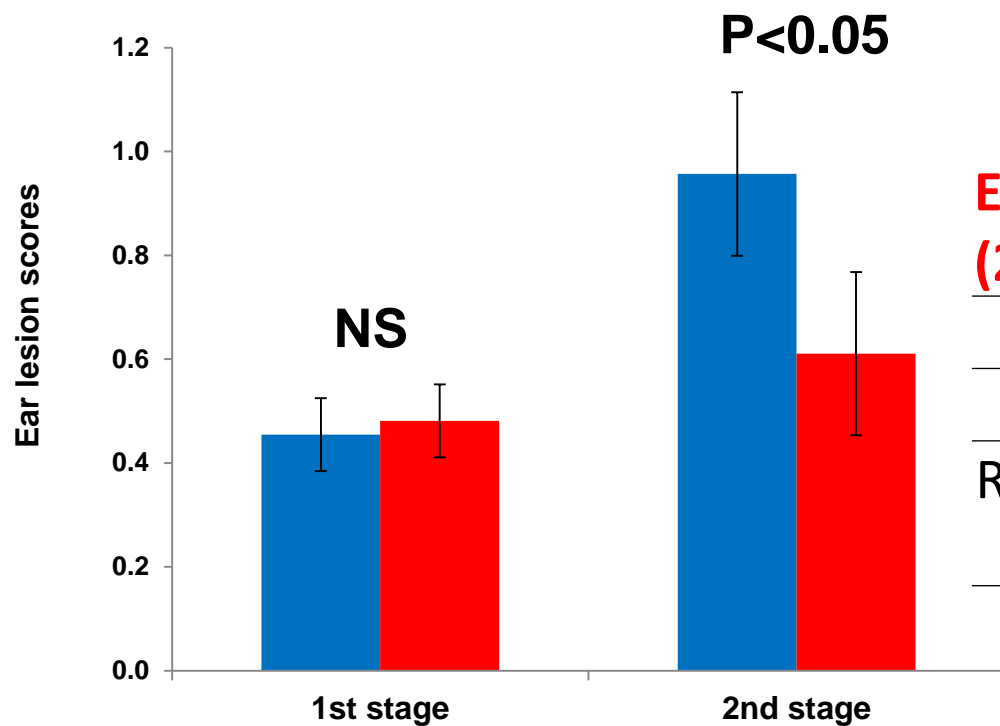
NO AB (n=6)

- **AB** and **NO AB** pigs treated parenterally with amoxicillin if clinical signs of illness detected
- Ear lesions scored weekly
- Weekly behaviour observations
- Mixed models and binomial logistic regression (SAS)

Ear biting in the 1st weaner stage



Ear lesions



**Ear lesions
(2nd stage)**

	95% CI		
	OR	Lower	Upper
Ref. NO AB			
AB	0.46	0.25	0.84



Discussion

- Lower likelihood of ear lesions in AB pigs during 2nd weaner stage in disagreement with the higher no. of ear bites performed by AB pigs during 1st stage
- More ear biting in AB pigs associated with competition/aggression?
 - More fighting, higher growth rates and feed intakes in AB pigs
- Behavioural changes in AB pigs associated with changes in gut microbiota due to antibiotic use?
 - Desbonnet et al. 2015. Brain, Behavior, and Immunity; Schokker et al. 2015. PloS One

Conclusion



Medicated feed played role in curing ear lesions
in AB pigs

13% of **NO AB** focal pigs had severe ear lesions vs. 5% of **AB** pigs



Thank you!



Department of
**Agriculture,
Food and the Marine**

An Roinn
**Talmhaíochta,
Bia agus Mara**

