Evaluation of Devi-Jex as a behaviour modifier in growing pigs:
Impact on growth performance, cortisol levels, and ear lesions

IPVS 2026 – Topic 10:One Health, AMR and Pig Welfare

DEVENISH™

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Introduction

Stress in pigs has multiple sources:
- Social
- Environmental
- Metabolic
- Immunological
- Physical

The consequences of stress and the resultant rise in cortisol levels has a negative impact on growth performance as feed intake is often reduced, which hinders growth rates. Behavioural changes are often observed such as ear, tail and flank biting. Such behaviours raise issues for animal welfare but also for animal health. Open wounds caused by biting allow an entry point for pathogens, which in turn increases the immunological stress experienced by the pig.

Objective:
Assess the growth performance, cortisol concentration and ear lesions in pigs fed Devi-Jex, to evaluate it's use as a behavioural modifier

Key Points

With 0.3% Devi-Jex:
- 40% Reduction in cortisol
- Reduction in ear lesions
- 1.14kg additional transfer weight
- Improved feed efficiency

Materials & Method

312 weaned piglets (Tempo, ToPigs) were allocated to two treatments groups based on weaning weight (6.15± 0.7kg). Piglets received a standard creep ration for an adaptation period of 14 days.

Dietary Regime

Days	Control	Devi-Jex
0-14	Standard creep ration (1.6% Lys, 15.8DE MJ/kg)	Standard creep ration (1.6% Lys, 15.8DE MJ/kg)
15-29	Standard weaner ration (1.5% Lys, 15.5DE MJ/kg)	Standard weaner ration (1.5% Lys, 15.5DE MJ/kg) + 0.3% Devi-Jex
29-52	Standard grower ration (1.1% Lys, 15.7DE MJ/kg)	Standard grower ration (1.1% Lys, 15.7DE MJ/kg)

Measurements

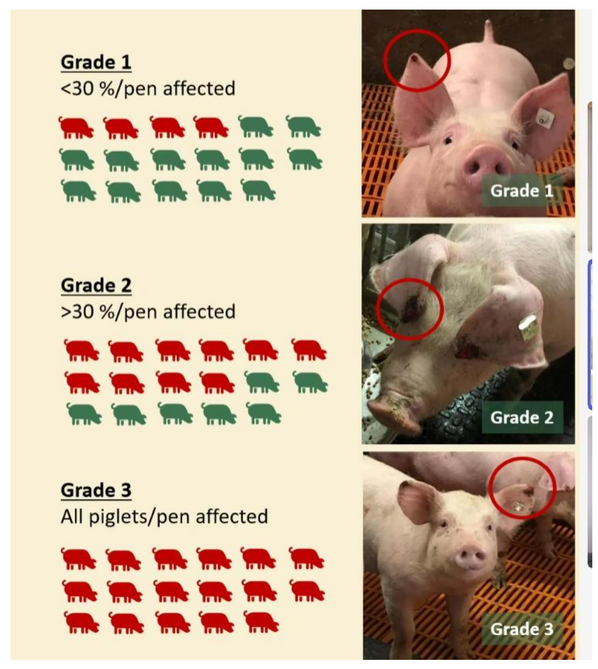
Post-weaning growth performance (0, 29, 52 days)
- Weight
- Feed intake
- Feed efficiency ratio

Cortisol concentration
- Saliva samples collected by rope at 22 days

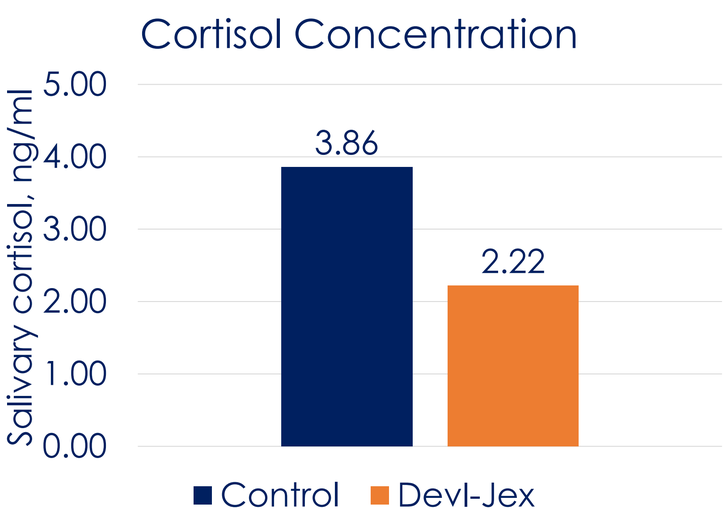
Ear lesions
- Scored 3x per week using scale
- Scoring started from week 2
- Average weekly score calculated by:

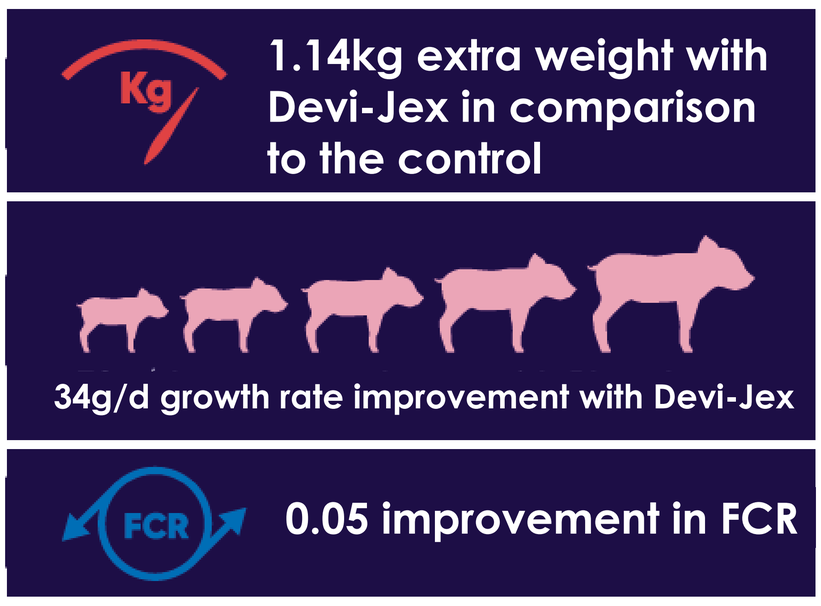
$$\frac{AP_{day} * GR}{AP_{tot}}$$

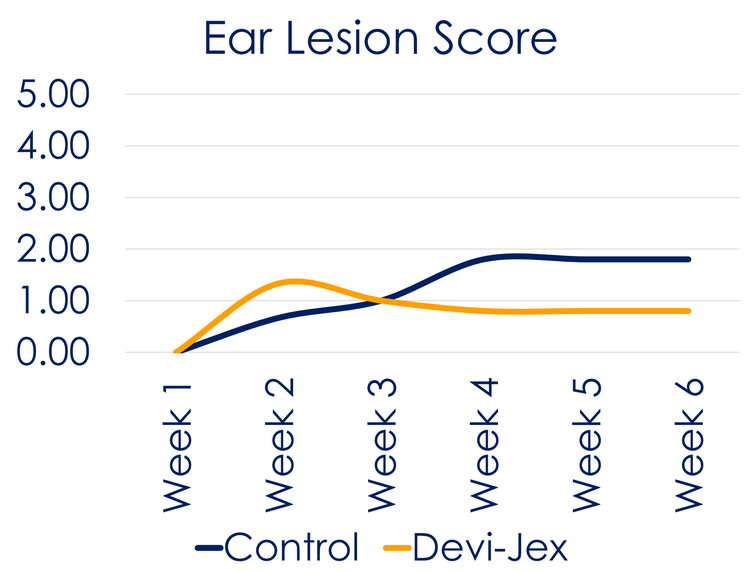
AP_{day} = *Affected pens at day*$_x$
GR = *Sum of Grades*
AP_{tot} = *Total number affected pens*



Results & Discussion







Cortisol is a key hormone and most used biomarker for stress. The cortisol levels between the groups was significantly different ($P<0.05$), with Devi-Jex significantly reducing cortisol concentration by 40%. This indicates that the Devi-Jex group had a lower physiological response to stress. The physiological stress reduction is supported by the growth performance and ear lesion results.

Growth performance improved when pigs were fed 0.3% Devi-Jex, the transfer weight was 1.14kg heavier due to the 34g/d improvement in growth rate. Feed intake between the two groups was similar. Due to the improved growth without an increased feed intake, the Devi-Jex group had better feed efficiency.

As the pigs consumed Devi-Jex the ear lesion score reduced and was significantly lower by the end of the Devi-Jex feeding period (week 4). The reduction in ear lesion score was maintained through to the end of the trial. Similar results were demonstrated with aggressive behaviours such as tail biting and occurrence of conflicts between pigs significantly reducing when pigs were fed Devi-Jex (Marchesi & Scollo, 2021).

The Devi-Jex group had a lower physiological stress response compared to the control group which reduced the occurrence of a stress behaviour (ear biting) and improved growth performance

Conclusion

Supplementation of growing pig diets with 0.3% Devi-Jex reduced the physiological stress response and severity of stress related behaviours.

Devi-Jex can successfully be applied as a behavioural modifier to aid animal welfare and growth performance in pigs.

Acknowledgements & References

MARCHESI, M.G., & SCOLLO, A. 2021. The effect of a feed supplement on reducing aggressive behaviour in long-tailed weaned pigs. Animal

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