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You can pool faecal samples from individual pigs to test for Porcine Circovirus Type 2 and *Lawsonia intracellularis* using real-time PCRs

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Introduction

Real-time PCR tests have been developed to detect and quantify Porcine Circovirus type 2 (PCV2) and *Lawsonia intracellularis* in pigs' faeces. Pooling of individual faecal samples is often used to reduce the costs of diagnostic testing. The objective of this study was to evaluate any change in the test sensitivity of PCV2 and *L. intracellularis* real-time PCR when individual faecal samples were pooled.

Materials and Methods

Forty eight faecal samples were collected from the rectum of individual pigs (>10 weeks) from four farms. Faecal samples were classified as diarrhoea +/- based on subjective assessment of consistency. Three individual samples were combined to make 16 pooled samples (8 diarrhoea; 8 non-diarrhoea). Individual and pooled samples were tested using real-time PCR tests specific for PCV2 and *L. intracellularis*. A positive result in any of the three individual samples was deemed "group positive". Changes in test sensitivity after combining the three individual samples were evaluated.

Results

The sensitivity and specificity of the pooled faecal samples for *L. intracellularis* were 86.4% and 100%, respectively. The sensitivity and specificity of the pooled faecal samples for PCV2 were 97% and 100%, respectively.

Conclusions

These preliminary results suggest that three individual faecal samples may be pooled for PCV2 or *L. intracellularis* testing using real-time PCR with minimal loss of sensitivity. Under the conditions of this study, the sensitivity of pooling was reduced when quantities of *L. intracellularis* or PCV2 in individual samples were low.