Effect of influenza A(H1N1)pdm09 virus on live weight of Duroc boars during growth phase (100-140 days)

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This study presents the impact of influenza A(H1N1)pdm09 virus infection has on Duroc boars during the growth phase between 100 and 140 days of age at a boar testing station. Data are obtained from an outbreak investigation at a boar testing station after clinical signs were reported in early April 2011. The station receives young boars (70-85 days old) and monitors their performance including daily feed intake and daily weight. Cohorts of 72 boars are kept in groups of 12 in 6 equal sized pens (14.0 m²) in the same room for an average of 72 days until they reach a bodyweight of 100 kg. Serological and virological tests were performed on 375 boars from all 16 rooms on 8 occasions from April to July 2011. A synopsis of the results is presented based on results from one room where 18 boars (8 were Duroc boars) were tested positive on 14 April 2011. A control group of a previous cohort of 23 Duroc boars that occupied the same room admitted in November 2010 was selected. Surveillance results confirmed that the station was not infected at that time. The growth curves of the average means of live weights of the two groups (infected vs uninfected) were compared. Student t-test was used to test significance in the differences between the two group means of the live weights. The growth curves of uninfected and infected pigs appear to diverge just before 100 days of age. This coincides with the detection of A(H1N1)pdm09 virus infection in the 8 Duroc boars on 14 April 2011. Even though the divergence in the growth curves indicated a possible negative impact of A(H1N1)pdm09 virus has on the growth rates of the Duroc boars, the one-tail t tests on group mean differences did not show consistently that the negative impact on live weight of Duroc boars were significant at the 95% confidence level.