



FOCUS ON RESEARCH

EFFECTS OF ORIGINAL XPC™ AND COCCIDIA VACCINATION ON GROWTH PERFORMANCE AND GUT MORPHOLOGY IN TURKEY HENS

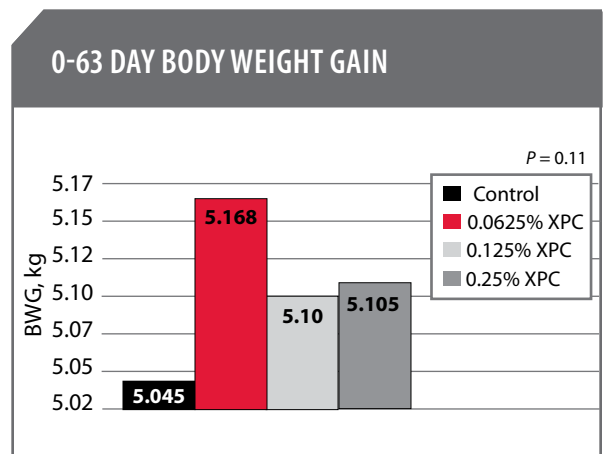
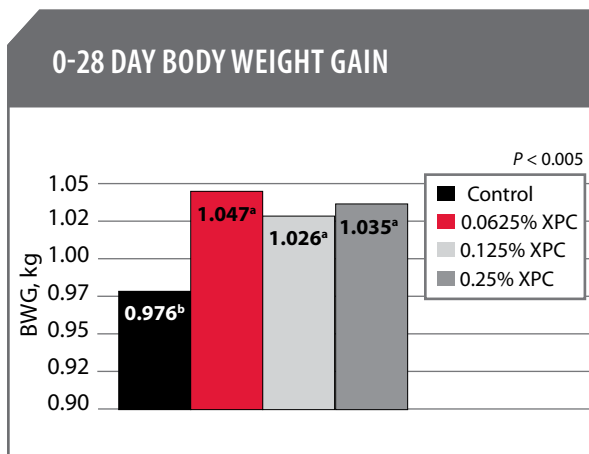
Research¹ was conducted by Virginia Tech to evaluate the effects of increasing Original XPC level and coccidian vaccination on developing turkey hen growth performance and gut morphology.

RESEARCH SUMMARY

- 63 day trial with 1,584 day-old female Hybrid Converter turkeys
- Four levels of Original XPC fed: 0, 0.0625, 0.125, or 0.25%
- Each dietary treatment was replicated by 18 pens (9 control and 9 coccidia vaccinated)
- Body weight and feed intake were measured and body weight gain (BWG) and feed conversion (FCR) were calculated
- Mucosal morphology (villus height) was measured in the duodenum

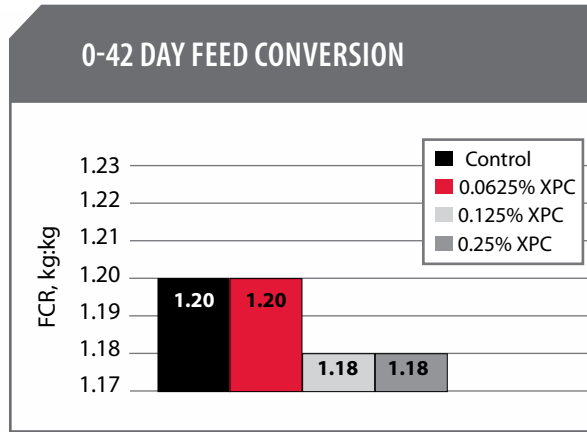
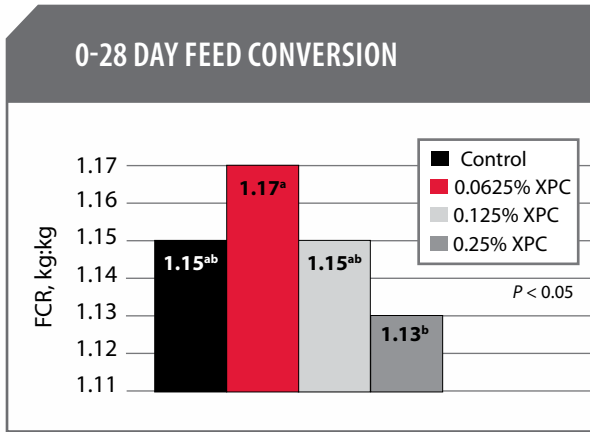
RESULTS

- Turkeys supplemented with 0.0625, 0.125, or 0.25% of Original XPC had greater BWG from 0-28 days ($P < 0.005$) and 0-63 days (numerically; $P = 0.11$) compared to the control.

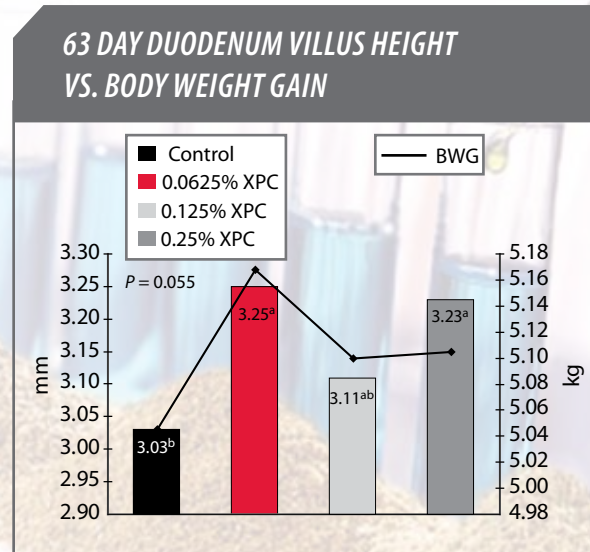
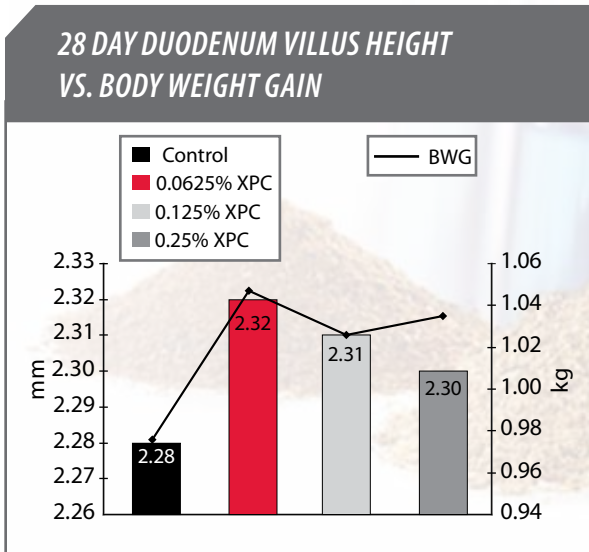


RESEARCH SUMMARY

- FCR was affected from 0-28 days, in which birds fed 0.25% Original XPC were the most efficient ($P < 0.05$).



- Gut morphology of the small intestine was modified by both vaccination and feeding Original XPC.
- Vaccination increased villus height in duodenum on day 28 ($P < 0.05$) and day 63 ($P = 0.062$).
- Turkeys fed 0.0625% Original XPC had the largest duodenum villus height on day 63 ($P = 0.055$) and also had numerically the largest 0-63 day BWG ($P = 0.11$).
- The effects of Original XPC on duodenum villus height corresponded well with the respective day 28 ($r = 0.92$) and day 63 ($r = 0.88$) BWG.
- There were no significant vaccination by Original XPC interactions for day 28 or day 63 growth performance or gut morphology.



If you would like more information on this study, please contact your local Diamond V representative.

¹Paiva, D. M., C. L. Walk, R. Lehman, J. R. Sottosanti, C. F. Honaker, D. T. Moore, and A. P. McElroy. 2010. Turkey response to the inclusion of a *Saccharomyces cerevisiae* fermentation product, Original XPC™, in antibiotic free diets following a coccidia vaccination. *Poult. Sci.* 89 (E-Suppl. 1): 283-284.

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