

The improvement of carbohydrate digestibility in wheat-based diets with xylanase



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Introduction

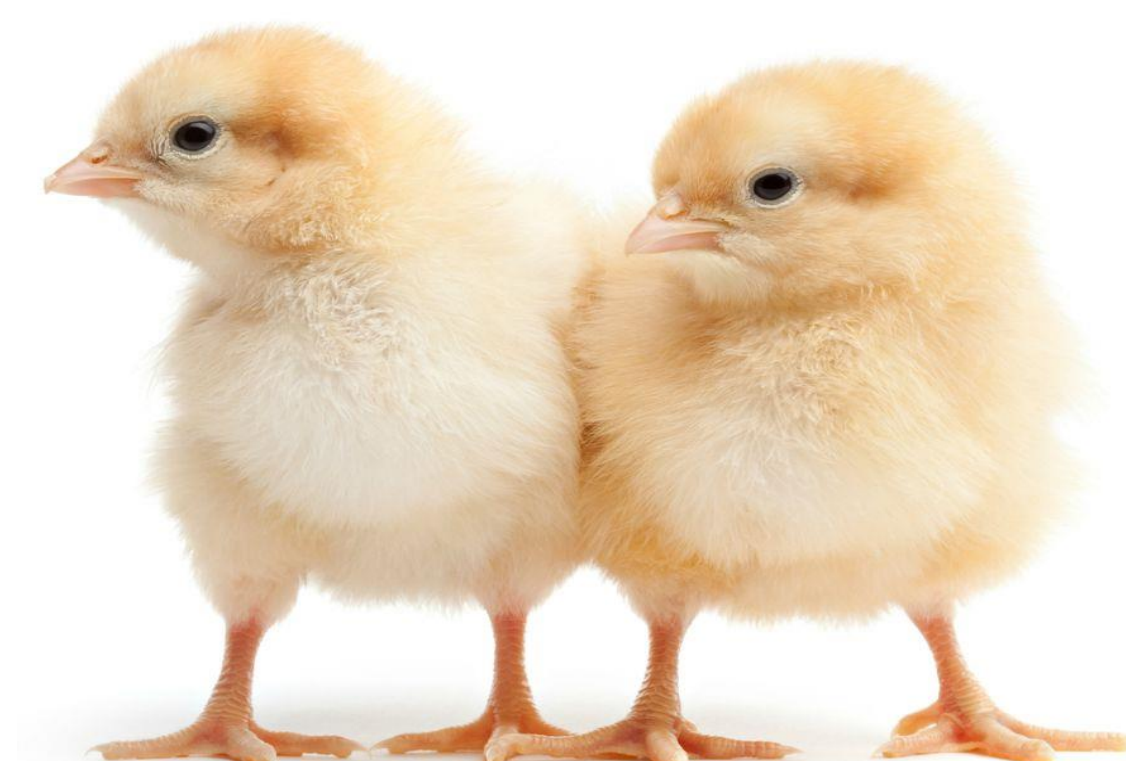
- An increasing problem in agriculture today is the pressure from consumers to reduce the use of antibiotics in poultry feed.
- One possibility would be to replace monensin sodium with exogenous xylanase.

Objective

- To evaluate if xylanase can replace monensin sodium to improve nutrient digestibility, based on the amount of fiber in the diet.

Diets

- 1). corn-based
- 2). wheat-based
- 3). corn-based with monensin sodium
- 4). wheat-based with monensin sodium
- 5). corn-based with xylanase
- 6). wheat-based with xylanase.

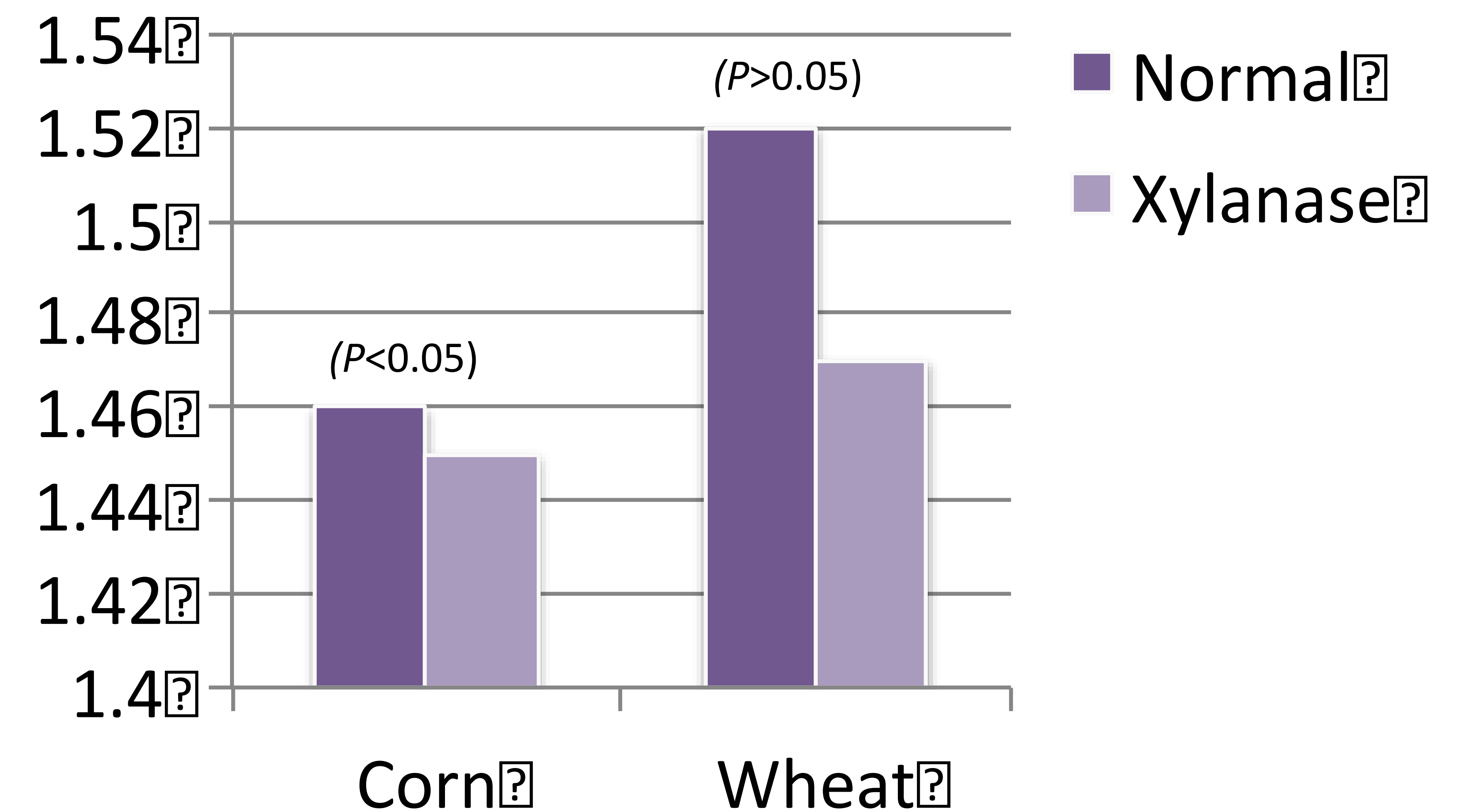


Procedures

- 216 Cobb 1-d-old chicks (6 birds/cage) were in battery cages for 21 days, fed ad libitum 1 of 6 dietary treatments.
- Body weight and feed intake were recorded weekly to determine body weight gain, total feed intake, and FCR.
- The data collected were analyzed using the GLIMMIX procedure of SAS, with cages being the experimental unit and treatment being the fixed effect

Results

- Main Effects of Chick FCR



Support

- Special thanks to Koch industries for their support and invested interest in this research project

Conclusions

- Xylanase improves digestibility with carbohydrates in wheat-based diets, and restores FCR in corn-based diets.
- Since the birds were in battery cages, there was little to no use of feeding an antimicrobial in this setting.