



SDI Review Form 1.6

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2015_AJEA_16997
Title of the Manuscript:	Effect of probiotic, carbohydrase enzyme and their combination on the performance, histomorphology and gut microbiota in broilers fed wheat-based diets
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1. No conclusion is included in the Abstract section. In addition, a more precise conclusion should be made in the Conclusion section. 2. The author stated that the composition of arabinoxylan in wheat increased the digesta viscosity, and therefore limited the digestibility. The major objective of this study is to study the effect of probiotics and carbohydrase on the wheat-based diet, indicating that to keep a constant percentage of wheat is very important in this study. However, in table 1, compared with other groups, NC+P had a lower portion of wheat, and NC+P+C had a higher portion of wheat, please explain it. Similar design was observed in table 2. 3. Although probiotics/enzyme increased digesta viscosity, which did not further affect gut microbiota, digesta pH, and intestinal morphology. Please state the possible mechanism involved in the improvement of dietary supplementation on the broiler performance?	1. Conclusion in the Abstract session will make it exceed 300 words stipulated in the Author's guidelines. Precise conclusion in the Conclusion Section? DONE 2. The only other ingredient that could have been adjusted was soybean meal which could make the diets not to be isonitrogenous. 3. Line 322-325: As expected, the addition of probiotic and carbohydrase significantly ($P < 0.05$) reduced digesta viscosity compared to the NC diet. There was a 46.8 and 50.6 percentage point reduction in digesta viscosity by addition of probiotic and carbohydrase, respectively. Probiotic/enzyme reduced digesta viscosity not "increased" as noted by the reviewer. Low gut viscosity normally increases the rate of diffusion of substrates and digestive



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		enzymes and enhances their effective interaction at the mucosal surface thereby facilitates nutrient uptake and animal performance are improved.
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Minor REVISION comments	1. Can probiotics and/or carbohydrase be applied in the wheat-based diet for broiler? At which stage (starter or grower), and why? 2. Heavier liver weight was observed in the dietary supplementation groups (Table 6). Do any injury caused by the dietary supplementation? 3. Although the author stated the reason for highest coliform counts in PC+C group (line 293-295), it is too general, please be more precise and clarified. 4. Do the author analyse the whole GI digestibility? Will it be the reason to improve performance? 5. Some typos were found in the article, please double check.	1. Results of our previous studies on broilers and turkey poult showed a significant increase in the body weight gain of birds on probiotic/enzyme over the other dietary treatments at starter phase. Enzyme component is necessary at early stage of the birds' life for improved digestion and utilization of nutrients since the GIT is just developing. Though probiotic required a period of time for an ideal intestinal microflora establishment and biochemical processes of active binding, it helps to boost immune response of birds and thereby improve their intestinal health. . 2. The result on weight of liver of birds on dietary supplementation group (Table 6) was similar to those on the control diet as well. No significant difference was recorded. No injury caused. 3. It could be as a result of differences in origin, strain as well as species of probiotics or enzyme. 4. Digestibility study was not inclusive in this experiment except gut microbiota load and intestinal
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		morphology. 5. Typos found were corrected. 6. Thank you
<u>Optional/General</u> comments		