



# EnzaPro®

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**ABSTRACT** ([J. Anim. Sci Vol. 96, Suppl. S3](#)):

**502 Evaluation of graded doses of a xylanase-direct-fed microbial feed additive on live performance, gut health and nutrient digestibility of wean-to-finish pigs.**

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A 125 d wean-to-finish trial was conducted to evaluate live performance, gut health and nutrient digestibility of pigs raised on AGP-free, corn-soy diets supplemented with EnzaPro® (EP; BioResource International), a blend of endo-1,4-β-xylanase (100,000 U/g) and multi-strain Bacillus direct-fed microbial (109 CFU/g). At 28 DOA, 96 newly-weaned, mixed-sex piglets ( $8.67 \pm 0.19$  kg BW; Duroc x [Landrace x Yorkshire]) were randomly allotted to 1 of 5 dietary treatments (n = 5 replicate pens/treatment [5 piglets/replicate pen], except for the positive control which had 4 replicate pens/treatment). Treatments included positive control (PC), a reduced-energy negative control (NC; PC minus 78 kcal/kg feed), NC + 0.01% EP (EP100), NC + 0.02% EP (EP200), or NC + 0.03% EP (EP300). Data were analyzed using PROC GLM of SAS. Overall, ADG tended to be greater ( $P = 0.055$ ) in EP treatments than in controls. Pigs fed diets supplemented with EP numerically outperformed PC and NC pigs in G:F by an average of 3.0% and 10.9%, respectively. At d 55, EP100 numerically increased Lactobacillus spp. count and numerically reduced total coliforms in duodenal chyle by 53% and 18%, respectively, compared to NC. At d 43, EP100 numerically reduced stomach pH of fasted pigs by 16%, compared to the NC. At 40 – 70 kg BW, nitrogen-corrected AME was significantly greater ( $P < 0.01$ ) in EP200 and EP300 pigs than in all other groups, including PC (2867 kcal/kg ME). EP100 significantly increased ( $P < 0.05$ ) crude fiber digestibility by 11.8%, compared to NC. Crude protein digestibility was numerically increased by EP100, EP200, and EP300 by 0.9%, 1.4% and 2.0%, respectively, compared to NC. These results suggest that EnzaPro supplementation at 100–300 g/MT may replace at least 78 kcal/kg feed, improve ADG and gut health, and increase digestibility of key nutrients in wean-to-finish pigs raised under AGP-free production conditions.

**Key Words:** xylanase, direct-fed microbial, wean-to-finish pigs