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The Effects of Antibiotic Alternatives on Feed Efficiency, Growth Performance, and Carcass Traits in Swine

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Objectives

The U.S. swine producers have been challenged to find antibiotic alternatives to use in their swine herd. With feed expenses accounting for the majority of their costs, the lack of an antibiotic could lead to increased expenses. Scours is a common occurrence that will cause problems with not only the animals, but producers as well; therefore, the need to investigate alternative sources is a necessity. The objectives of this study were to: 1. Determine the effects of antibiotic alternatives (lysozyme and show feed additive) on feed efficiency in market swine and 2. Determine effects on carcass characteristics.

Materials and Methods

Thirty pigs (15 barrows/15 gilts) were assigned to 1 of 3 treatments (TRT). Treatments included: TRT C: control (commercial diet with no additives, $n = 10$), TRT L: lysozyme alternative (commercial diet with lysozyme additive, $n = 10$), TRT S: Ohio show feed alternative (commercial diet with show-feed additive, $n = 10$). Animals used in the current study were approved by IACUC (2017A00000075). On a weekly basis, pig weights and feed consumption were recorded. Carcass characteristics were measured on a 48 h. chill where

carcass traits (back fat, LEA, carcass weight, subjective and objective color scores, and marbling, firmness, and wetness scores) were recorded, at the 10th/11th rib interface (left side of carcasses).

Results

With little to no variation between treatments, results revealed no significant ($P > 0.05$) differences in feed efficiency or carcass characteristics. Treatments L and S revealed higher feed efficiency levels than control between d 42 and 77; however, by the end of the trial no differences ($P > 0.05$) were noted.

Conclusion

Overall, Trt S resulted in less mortalities when compared to other treatments. Additionally, TRT S was the most cost effective overall when viewed on an economic basis; which will be beneficial to the producer. However, with the combination of number of observations and the significant reduction in numbers due to a Scours outbreak (*E. coli*), authors recognize the need to repeat the study with an increase number of animals per treatment. On a side note, Trt L proved to not be suitable for *E. coli*.