

Comparison of corn grain from biotech and non-biotech counterparts for grow-finish pig performance

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An experiment with 96 growing pigs (initial BW 23.5 kg) was conducted with the objective of testing the hypothesis that the inclusion of a genetically modified corn in rations for swine does not compromise pig performance or carcass quality. Four corn sources were used in the experiment. Corn 1 was bin-run obtained from the SDSU feed mill. The remaining three corns were obtained from Pioneer Hi-Bred International Inc. Corn 2 was grain produced from hybrid Pioneer ® brand 33J56, corn 3 was grain produced from hybrid Pioneer ® brand 33P66, while corn 4 was grain produced from hybrid Pioneer ® brand 33P66 containing the TC1507 event. TC1507 is an event that contains the *Cry1F* gene from *Bacillus thuringiensis* var. *azawai*. This gene encodes the Cry1F protein that has been shown to have insecticidal activity towards several insects including European corn borer and black cutworm. The trade name for this corn is Herculex™ I. This trait was developed through collaboration between Pioneer Hi-Bred International, Inc. and Dow Agrosiences LLC. Diets based on each of the four corns were formulated using a single source of soybean meal. Pigs were assigned to four different treatment groups at approximately 23.5 kg based on ancestry, gender, and BW. There were three pigs per pen and eight replicate pens per treatment. A three phase feeding program was used with diets containing 1.0, 0.8, and 0.63% LYS within each phase. At 120 kg BW, pigs were harvested and carcass measurements recorded. During the first phase of the experiment, pigs fed the diet based on corn 3 had greater ($P < 0.05$)

ADFI than pigs fed the other corns, however, there were no treatment differences in ADG or G:F. During the second and third phases and overall, no differences in ADG, ADFI, or G:F were observed. Likewise no differences in dressing percentage, 10th rib back fat, loin-eye area, fat free lean, or lean meat percentage were detected. It is concluded that no negative effects on pig performance, dressing percentage, or carcass quality are associated with the use of corn produced from seed containing the Herculex™ I trait.

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