

Research Abstract

METABOLISM AND NUTRITION

Feeding co-extruded flaxseed to pigs: Effects of duration and feeding level on growth performance and backfat fatty acid composition of grower-finisher pigs.

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Purpose : To examine the effect of co-extrusion on subsequent Omega-3 fatty acids in pig tissues.

Methodology :

- 80 pigs were included in the study with 4 gilts and 4 barrows per treatment. Animals were grouped by weight, parentage and gender.
- Nine treatment groups and one control group were included in the study. The nine treatments were 3 levels of LinPRO (10, 20, 30%) tested for each of 3 different durations (4, 8, and 12 weeks).
- Pig weights and feed consumption were used to calculate average daily gain, average daily feed intake and feed conversion.
- Analysis included level of flaxseed in the diet, length of feeding, gender, and interactions between all effects.

Results :

- Feeding flax containing diets for increasing durations led to increases in Omega 3 and Omega 6 fatty acids, total polyunsaturated fatty acids and a reduction in total monounsaturated fatty acids and saturated fatty acids.
- Barrows had higher interactions for ADG, ADFI and lower feed conversion than gilts. As dietary flaxseed increased, ADFI decreased but ADG was unaffected.
- Prolonged feeding of co-extruded flaxseed, independent of its level of dietary inclusion, reduced ADG.

Conclusion :

- Addition of LinPRO to pig diets provided a highly available source of Omega-3, which resulted in increased Omega-3 levels in backfat.
- It is possible to achieve the levels of Omega-3 required for an enrichment claim by varying the level and duration of co-extruded flax fed to pigs.