

## Dietary Compounds to Control Odour Produced From Pork Fat in Boars

### What is this research about?

The objective of this study was to develop dietary manipulations to prevent boar taint, an unsavoury odour produced when pork fat from uncastrated male pigs is heated. In order to reduce boar taint, pigs are often castrated after birth. However, with animal welfare concerns about castration and the negative effects on production efficiency, finding alternatives for controlling boar taint has become important.

The researchers wanted to determine whether adding the binding agents activated carbon (AC) or Tween-60 in the pigs' diet before slaughter would decrease levels of the boar taint compounds androstenone (AND) and skatole in boars. Levels of skatole were very low in all boars in this study.

### How can you use this research?

**Farmers** would benefit from this research because they would be better informed about how to proceed feeding their pig/boar stock and deciding if and when to castrate them.

They would also increase their profits due to decreased feed costs and increased payment for leaner pigs.

### What you need to know:

Adding AC or Tween to finishing diets for boars can reduce the levels of plasma and fat AND, though further work is needed to confirm the effects of these treatments on reducing fat skatole levels. The technology also needs to be effectively demonstrated under commercial production conditions.

**Animal Biologists** would benefit from this research because the more awareness a subject has, the more research can be done to determine the most effective and efficient way to proceed with treatment.

**Butchers / Grocery Stores** would benefit from this research because they would be able to inform customers that no foul odour will be emitted when cooking pork products. This might result in consumers being more readily accepting of pork products if the pigs are castrated.

## What did the researchers do?

The researchers evaluated the effectiveness of adding AC or Tween-60 to pig finishing diets to reduce levels of AND and skatole in plasma and fat of entire male pigs.

AC is a form of processed carbon that is extremely porous and possesses a large amount of available surface area for adsorption. It is used because of its efficiency to adsorb solutes in aqueous solutions. Tween-60 is used extensively in the food, cosmetic and pharmaceutical industries to solubilise essential oils into water-based products.

Yorkshire boars were fed diets supplemented with AC or Tween for 28 days followed by a fourteen day recovery period on a control diet without AC or Tween.

## What did the researchers find?

The researchers found that feeding diets supplemented with AC reduced the levels of AND in plasma by day 28 of the study and by day 42 levels in fat were reduced. They also found that AC treatment did not affect growth rate in this study; therefore, short-term use of AC does not appear to have negative effects on performance.

Feeding diets supplemented with Tween significantly decreased the levels of plasma AND by day 28 but did not affect levels of fat AND or plasma E1S compared to day 0 of the study. However, fat AND levels decreased between days 28 and 42 following the Tween treatment.

## About the Researchers:

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Boar taint, androstenone, skatole, activated carbon, Tween-60 , pork

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