

## PROJECT REVIEW

<b>NAME:</b>	<b>Kelly Westmacott</b>	<b>Full Time</b>	<b>Year 2</b>
<b>INSTITUTE:</b>	<b>University of the West of England, Bristol</b>		
<b>TITLE:</b>	<b>Characterisation of novel technology for boar taint detection to assist with the production of taint-free pork</b>		

### AIMS & OBJECTIVES:

<ul style="list-style-type: none"> <li>• My project aims to characterise a device which can measure the level of boar taint in the fat tissue of pigs.</li> <li>• The device will be able to simultaneously detect boar taint compounds, and give user-friendly read outs.</li> <li>• The results will be produced rapidly to allow for the carcass to be sorted correctly before reaching the end of the abattoir line; preventing tainted meat reaching the consumer.</li> </ul>
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### KEY MILESTONES:

	<b>TARGET DATE:</b>	<b>ACHIEVED DATE:</b>
Introduction to the literature, familiarisation with techniques	May 14	May 14
Characterisation of device parameters with various techniques types	May 14	May 14
Literature review for potential interference compounds	August 14	August 14
Analysis of potential interference compounds: vitamins and hormones	August 14	August 14
Collection of initial adipose tissue samples from collaborator JSR Genetics	April 15	April 15
Training in validation technique (GC), measurements of boar taint compounds in adipose tissue by both the novel method and validation method	April 16	On target

### KEY ACHIEVEMENTS:

<p>Literature review carried out on potential compounds which could be encountered in the adipose tissue which could potentially cause interfering effects. Using the data gathered in the literature review, studies were performed using the novel device to assess the possible interferences from hormones and vitamins. Studies concluded that none of these compounds caused an interfering effect.</p> <p>Visited our collaborator JSR Genetics Ltd., important information was gained regarding the abattoir setting for the practical implementation of our novel technology. Analytical measurements taken to inform on environmental and substrate parameters required for efficient operation of our technology in the abattoir setting.</p> <p>First year progression viva successfully completed, in accordance with the University of the West of England's doctoral training requirements.</p> <p>Established and developed the validation method (Gas Chromatography) for the analysis of each of the boar taint compounds. Successfully analysed an initial batch of samples from our collaborator (JSR Genetics Ltd.) using both our novel technology and the validation method. Initial correlation plot displayed a good correlation.</p>
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### BENEFIT TO LEVY PAYERS:

<p>This research area is linked to three priority areas: (i) Breeding management: facilitating breeding via implementation of the new technology; (ii) Applied economics: the project will contribute to production of boar taint-free heavier pigs and, hence, increasing income margin for pig producers' (iii) Food Quality: the technology will allow the producer to state that their meat is free from taint. All of these aspects will improve the competitiveness of the UK pig industry.</p>
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<b>SUPERVISOR(S):</b> Prof John Hart, Prof Olena Doran, Dr Adrian Crew	<b>FUNDERS:</b> AHDB Pork, JSR Genetics Ltd, UWE	<b>DATED:</b> 29/10/15
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