Project summary

Design and scoping of fully integrated objective measurement modules including yield & cut weights prediction [Phase 1]
Terminated project

Project code: P.PSH.1413

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Executive summary

Background

This project proposes to develop a prototype design and work schedule for the development and evaluation of a fully integrated OM modular solution for implementation in beef processing. This will enable a suite of OM technologies to be collectively trialled and evaluated to measure valued hot carcase quality and yield attributes. This initial phase 1 design and scoping work will be used to inform an expanded proposal to develop a fully integrated objective measurement modular solution. A specific focus of the design of the carcase measurement room will be on the first Frontmatec BCC-3™ prototype installation in beef processing for objective carcase grading and yield prediction to enable validation of predicted yield and cut weights in Australia. A series of discovery exercises will be undertaken in this project and used to develop design drawings, specifications and a detailed work schedule for the next proposed build and test stage (i.e. phase 2, not part of this current work). This will also include a detailed review of carcase identification processing methods to ensure that there are accurate carcase tracking and identification methods in place. The project will review business management systems and due diligence of flow of data around the business to enable real-time decisions and identify new business opportunities.

Objectives

The overall objective of the project is to deliver a blueprint, including layout drawings, specifications and detailed work schedule to trial and evaluate a fully integrated OM modular concept for implementation in beef processing. A specific focus of the design of the carcase measurement room will be on the first Frontmatec BCC-3™ prototype installation in beef processing for objective carcase grading and yield prediction.

Methodology

The following phased approach is proposed, including i) Project planning, ii) Discovery, iii) Design, evaluate & validate, and iv) Final report.

Results/key findings

The preliminary room design, detailed budget and integration design characteristics have been completed as scheduled in the agreed project work plan. However, due to the expanded and comprehensive design and feasibility work being completed, it was agreed by the project steering group not to progress the overseas discovery study tour. Due to the expanded and comprehensive design and feasibility work being completed, it was agreed by the project steering group not to progress the overseas discovery study tour. It was agreed to terminate the project earlier than scheduled, and the discovery exercise (Milestone 2A) and final report (Milestone 3) were not achieved.

Benefits to industry

BCC-3™ can provide highly accurate and detailed data on the inherent quality and yield potential of beef carcases. Value is derived from a BCC-3™ when the slaughterhouse uses these data to optimize its in-house processes for sourcing, production, and matching of its products with customer requirements. BCC-3™ is an accurate TOOL the slaughterhouse can use to improve its understanding

of its raw material and how well the raw material is utilized. As described above, there are many ways the slaughterhouse can use this improved understanding to improve its supplier base, operational profitability, and customer satisfaction.

Future research and recommendations

This initial phase 1 design and scoping work will be used to inform an expanded proposal (i.e. Phase 2) to build and commercially evaluate an objective measurement modular solution, including BCC-3™ prototype installation for yield and cut weights prediction. The next phase will be final reporting, including recommendations for any further R&D required to fully implement and adopt across the business, including:

- Lean meat yield (LMY%) to be an accredited trait for beef.
- Accreditation trials must be designed to ensure data collection enabling equipment providers to present equipment performance on LMY% trait across the full range for beef.
- Tools and features should be implemented which enable up-stream slaughter line feedback to be used for process optimisation.