Snapshot report

Beef Zero

Leap 4 Beef- Project 0 (Stage 1) for Various modules

Project code
2024-1088

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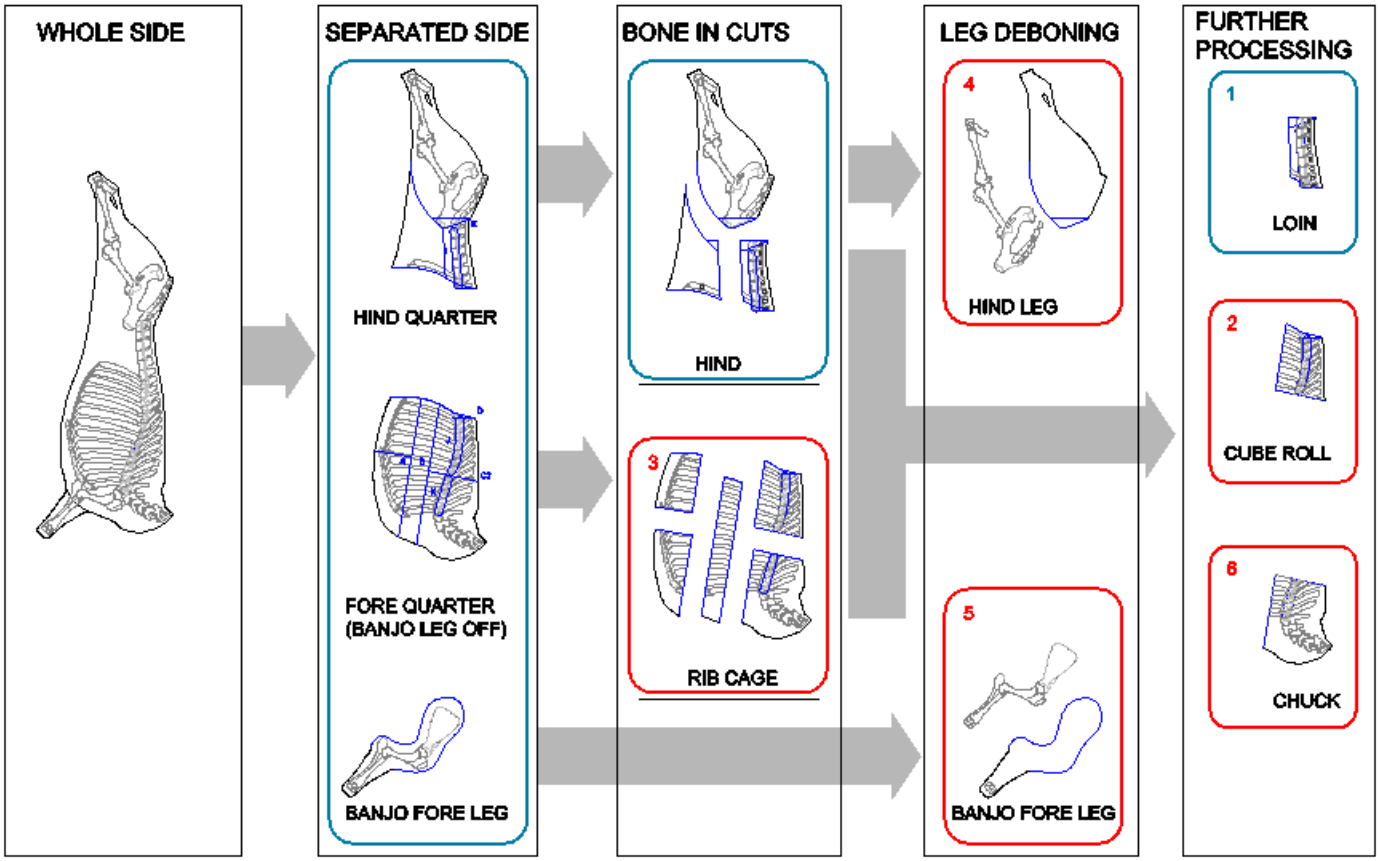
Project description

The purpose of this project is to assess the feasibility of the various proposed Beef automation modules.

Project content



The aim of this project was to assess the feasibility of modules 2 to 6.

To assess the feasibility of these modules it is necessary to understand

- the items produced
- the specifications that govern production of the produced items
- the production methods that are followed
- the value of produced items
- the possible benefits of automation in terms of labour requirements, yield and value

Site visits to a Australian processor provided an understanding of current processing methods and outcomes. Small cutting trials provided some indication of how methods and outcomes might benefit from the envisaged automatic modules.

Automation of beef processing has good has good potential to increase product value. If development builds on test equipment installed for the development of module 1, the development path could be relatively fast and low cost.

Project outcome

For the various modules the finding were:

1.1 Module 2

It is proposed that further development of the cube further processing concept is justified. Where variation of settings, further finetuning, supported with trials and associated accuracy measurements should be the next step.

1.2 Module 3

Development of the fore cutting module should be pursued because it is likely to provide good direct benefits, return on investment and provides cuts that are ideal for other beef automation modules.

1.3 Modules 4 and 5

Further development of the Hind and Fore leg boning automation should be pursued. Particularly to establish capital costs of the approaches proposed and enable completion of the return on investment calculation.

1.4 Module 6

It is proposed that further development of the chuck further processing concept is justified. Where variation of settings, further finetuning, supported with trials and associated accuracy measurements should be the next step.

Benefit for industry

Assuming for a processor of 200-300,000 cattle per year

Module 2 expected return on investment is: $890,000 - $2,830,000 per year.

Module 3 expected return on investment is: $720,400 - $ 2,080,000 per year.

Module 4 & 5 expected return on investment is: $335,000 - $ 665,000 per year.

Module 6 expected return on investment is: $400,000 - $1,800,000 per year.

Useful resources

Cut specifications and diagrams are taken from ‘Handbook of Australian Meat 7th Edition (International Red Meat Manual) published by AUS-MEAT limited.

Cross sectional photos are taken from the University of Nebraska – Lincoln website. (https://bovine.unl.edu)

The published report for MLA project p.pip.0772 is available from the Meat & Livestock Australia website. (https://www.mla.com.au)

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