



SAPI SHEEPMEAT ADVANCED PROCESS INTEGRATION

AgResearch MIRINZ Workshop 2007

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<http://www.ppcs.co.nz>



What is sapi?

- An opportunity to incorporate all the latest lamb processing technology in one place
- Provides a platform for the testing of the technology in a real life situation under commercial conditions
- On-line real time automatic measurement of carcase characteristics to predict end product attributes
- The next big step forward in meat processing



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first*

Why are we telling you this?

- This PPCS initiative is seen as a positive move forward for the NZ Meat Industry
- Industry funding for the project is under negotiation
- Industry access would be possible if this funding is successful
- 12 month project duration - rapid commercial application
- Additional interaction and feedback will further enhance the project



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PROJECT OUTLINE

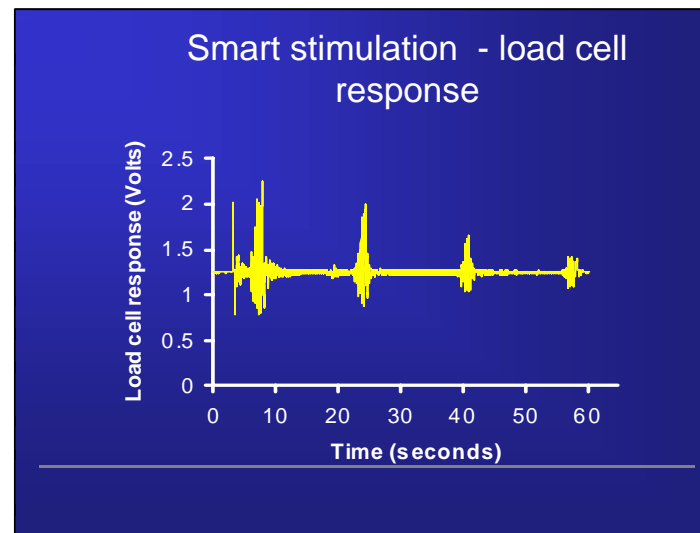
- Sited at PPCS Pareora
- Two chain operation with traditional immobilisation and ES
- Continuous spray cooler following stimulation
- RFID skids & full carcass tracking by February 2008
- HF immobilisation &, accurate carcass weighing by January 2008



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PROJECT OUTLINE 2

- Smart stimulation by ??? (under final development)

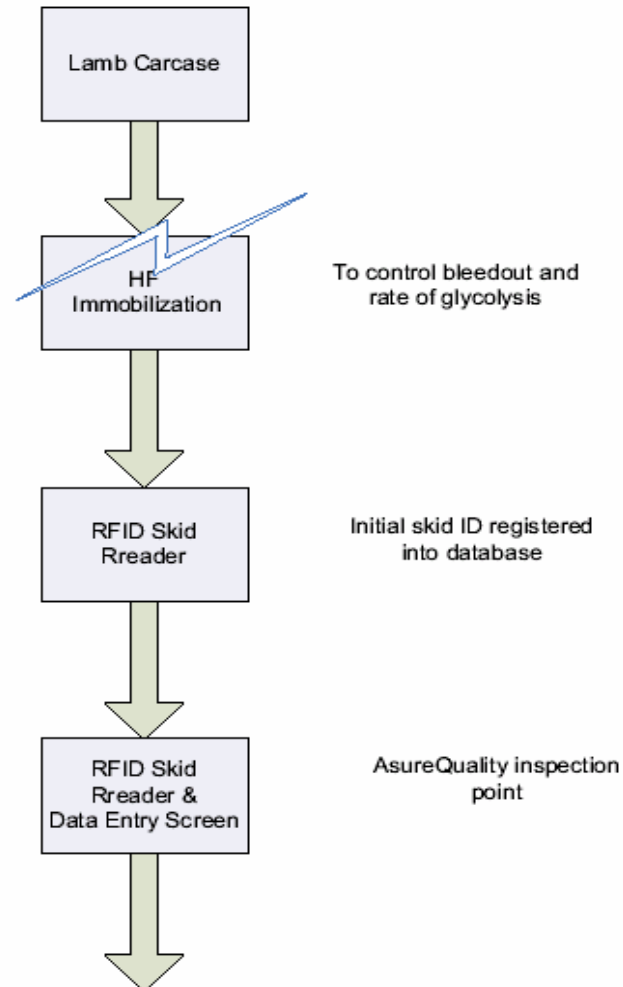


- Vision/X-Ray grading during 2008



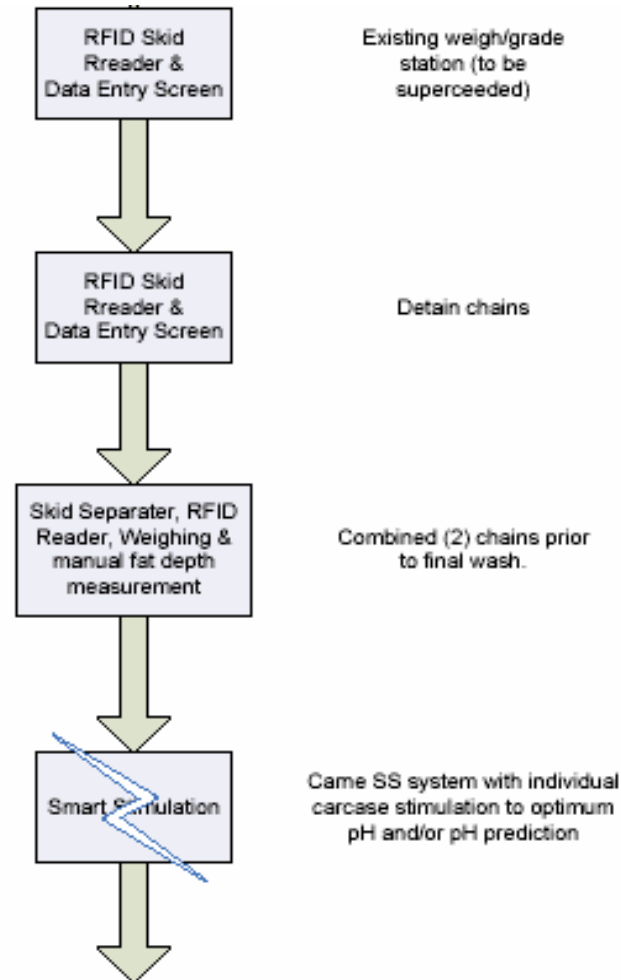
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PROJECT FLOWPATH



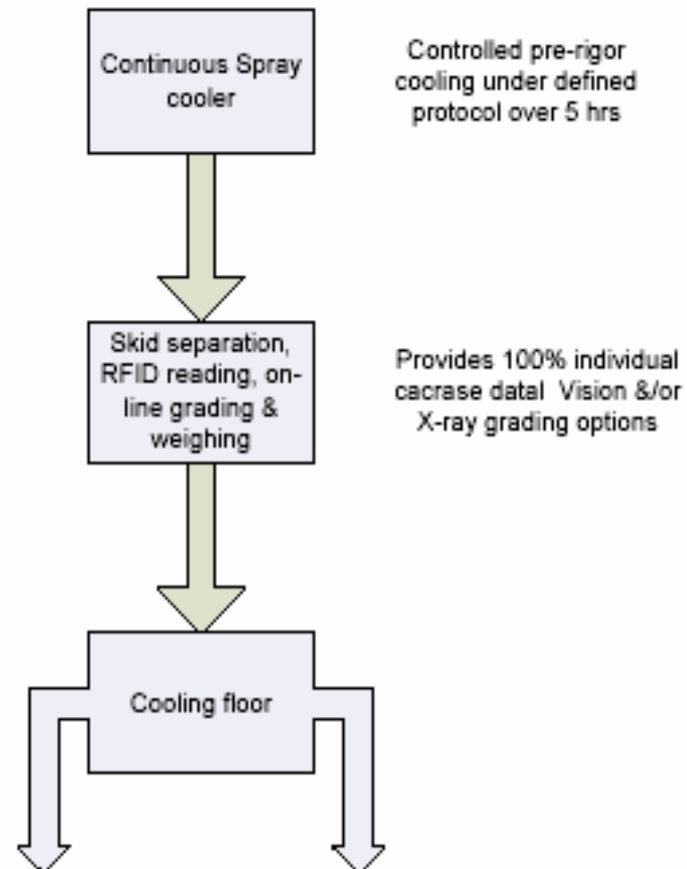
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PROJECT FLOWPATH 2



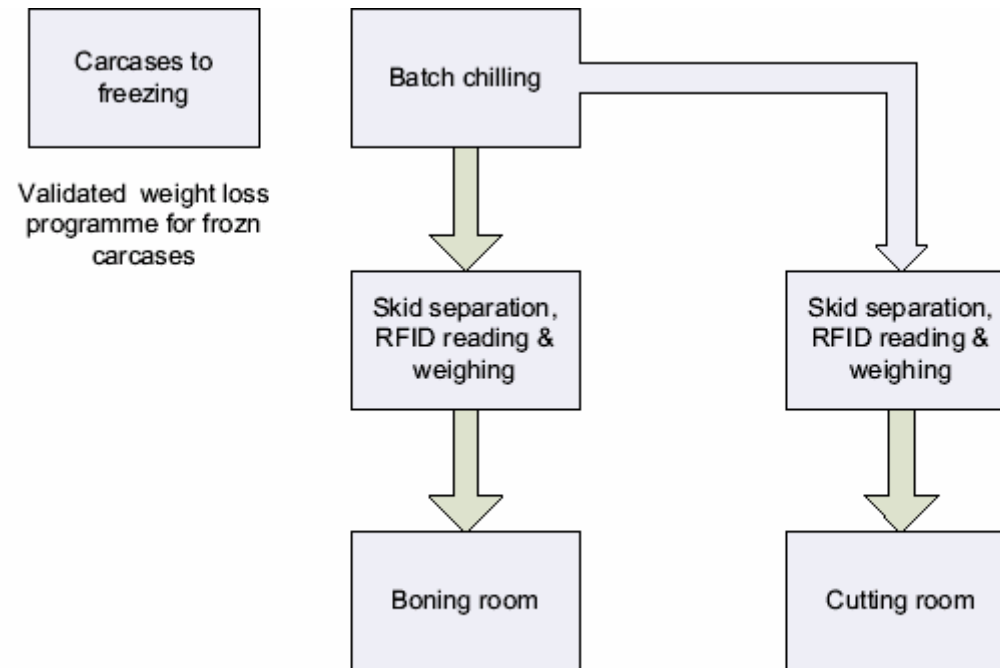
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PROJECT FLOWPATH 3



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PROJECT FLOWPATH 4



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Key elements

- RFID skids with high reliability (99.9%)



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Key elements 2

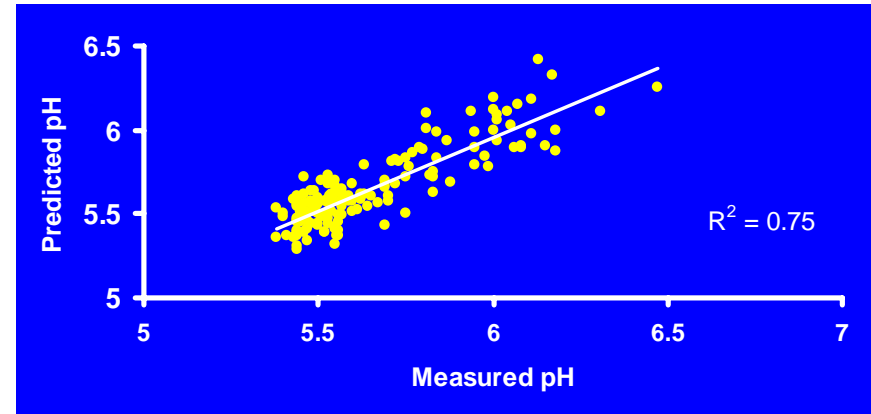
- RFID reader installation



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Key elements 3

- Accurate carcase weighing
- pH prediction
- Controlled spray cooling
- Relocated grading (5hrs after SmartStim)
- Integrated data collection
- Product attribute prediction



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EXPECTED OUTCOMES

- Improved traceability
- Better carcase attribute capture
- Improved blood recovery
- Reduced variance in meat quality attributes
- Improved yields
- Better prediction of final saleable product from carcase attributes
- Labour savings



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What next?

- NIR carcase sensing with pH, tenderness, drip, colour and meat composition prediction
- Automated fat depth measurement
- X-Ray imaging for grading and product prediction
- The 'Zeus' stun
- Automated DNA sampling for product characteristics and rapid microbiology



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