final report

Project Code: P.PIP.0208

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Further development to auto load VIP shoulder puller to Australian conditions at WAMMCO

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milestone report

MLA project code:	**P.PIP.0208**
MLA project title:	**WAM6 - Further development to Auto Load VIP Shoulder Puller to Australian conditions at WAMMCO**
Project leader:	**Ken Brogan**
MLA project manager/coordinator:	**David Doral**
Milestone number:	**5.0**

Milestone 5.0 Final Report

- Final report and video
- WAMMCO will collect and make available to MLA and Realcold pre and post installation data on VIP performance on different sheep types, labour savings, OH&S benefits and pelt improvements

Abstract

The equipment has been successfully running in a production environment since final commissioning on the 14th January 2011. During the commissioning phase a number of short videos where taken for our own records and are available for reviewing. On the 22 February 2011 WAMMCO provided a "VIP Assessment" (appendix 1) showing the success rate over a number of various stock types, wool length and stock sizes. The success rate from this assessment is 99.5% with all failures being of the same breed (Dorpers). It is unknown how many Dorpers were processed during the assessment.

Project objectives

1. Achieve successful and consistent auto load shoulder pulling
Measured by consistent machine action requiring virtually no manual intervention.

2. Achieve intended labour saving and OH & S issues
Measured by reduction of staff, up to 2-3 labour units and reduced strain claims over an all manual operation.

3. Achieve more consistent carcase presentation consequent on requirement for consistent presentation to Auto Load VIP Shoulder Puller
Measured by production assessment

4. Confirm the Auto Load capability across a range of Australian sheep
With correct work up presentation, monitor the successfulness and note any weakness with particular stock (types, condition), look for potential improvements to enhance an Australian version of the Auto Load Machine.

5. Improved bacto and contamination levels
Bacto and contamination levels drop due to improved processing standards

6. Improved pelt quality by reduced pelt strain
Measure if 1-2% improvement in pelt quality

7. Return machine to manual load if required

Success in achieving Project Objectives

1. Achieved. Sample assessment shows a success rate of 99.5% with the small failure rate being all off the same breed (Dorpers).
2. Achieved. There is a direct labour saving of one labour unit per shift as the machine no longer needs a dedicated operator. There may also be saving is lead up (neck clearing) and post VIP with less clearing of "breaks", however these are unknown as this stage. The safety risk of manually operating / loading the machine has been removed and the improved guarding has increased the general safety of the machine.
3. Achieved. Consistent carcass presentation is vital to achieving a high success rate, this was helped by the slaughter floor supervisor visiting a NZ plant to learn the finer points of presentation required for the auto load machine.
4. Achieved. WAMMCO at times process a number of different breeds, wool length and animal sizes all within a days production. As shown on the VIP assessment two "mixed" sale lines were processed with the only failures being Dorpers. Is it at this time unknown as to the reason for this, whether it is a pelt quality issue ie freshly shorn, carcass presentation or carcass shape / leg length etc.
5. At this stage no pre or post conversation statistics have been provided, other than a general comment stating that no reports of change have occurred.
6. At this stage no pre or post conversation statistics have been provided.
7. Not required as machine is operating successfully.

Overall progress of the project

Project is complete.

Recommendations

1. Light array Setup:
   The light array measures the carcass length which determines the pull profile used by the auto load VIP. Due to the floor being raised where the light array has to be positioned we are not getting the full benefit of all the profile sizes available. To correct this, the floor around the light array would need to be lowered to the level of the floor directly under the VIP frame.

2. Investigate failures:
   Gather more information on failures, specifically the Dorper breed to see if there is a common factor that can be addressed to reduce the failure rate. At this time the percentage of Dorpers processed is unknown.

3. Auto wool length sensing:
   The machine is an auto load machine and when running the only intervention required by an operator is the selection of "shorn, normal or woolly" for the wool length. As the plant tends to process a mixed range of stock and wool conditions in any one day, with variations in wool length on carcasses being completely random. The addition of automatic wool length sensing and selection would remove the need for operator intervention. This is likely to increase the success rate as the trend tends to be to select a setting such as "normal" and let the machine do its best to handle the woolly of shorn animals. This can result in some pull failures as the load position and pull profiles for each wool type is different. The development of this technology would increase the appeal of the VIP Automatic shoulder puller to other Australian plants.

4. Return Visit:
   We recommend for your consideration an additional "Fully Paid" revisit to site to further fine tune the operation of the equipment, to improve the carcass presentation and maximise the results of the project objectives. The timing of the visit depends on the stock being processed. If the stock continues to be of reasonable quality, a visit within two months would be sensible. Otherwise it is standard for us to retune these systems say 1 -2 weeks after the start of the next season.

Appendices

1. VIP assessment as received from WAMMCO.

2. Attached materials and labour cost estimate split to achieve the above Milestone 5.0.

Appendix 1.

VIP assessment

In order to assess the performance of the VIP shoulder puller performance following the conversion to auto load observations of the outcomes after the final puller were recorded as per the chart below.
All defects were recorded however no assessment of the cause of the defect was attempted.

Date	22 Feb	22 Feb	22 Feb		
Time	9am	11am	2 25 pm		
Stock	Lamb all wool lengths	Sale Line Mixed	Sale line Mixed + Dorpers		
Sample size	375	250	300		
Leading leg sock	12	13	14		
Trailing leg sock	4	1	4		
Leading leg skin	4	1	5		
Trailing leg skin	4	4	1		
Torn pelt remaining on	6	1	2		
Incomplete pull skin attached	2	0	2		
VIP Incomplete pull	0	0	5 (all dorpers)		

Sample 1 As a general observation the shoulder puller is pulling the pelt to the waist / hip area of the carcass and there were no positive sightings of the shoulder puller not pulling far enough to cause defects at the final puller.
Sample 2 Closer attention to the shoulder puller. 2 x no grip on leading side.
Sample 3 Shoulder puller failed to pull 5 to the waist, all were dorpers and did not load into the clamps enough for a complete pull.

Note:
This was received from Stuart Mahon (Wammco) on the 24-02-11

Appendix 2.

Phase Code	Description	Qty	AU$ Rate	AU$ Total
BLS	Black Steel labour Total			$ -
DES	Design and Projects labour Total			$ 6,000.00
SST	Stainless Steel labour Total			$ -
Total Additional project admin costs to Milestone 8.0 Final Report and Video				$ 6,000.00