



final report

Project code: P.PIP.0232
Prepared by: Clive Richardson
MINTRAC
Date submitted: July 2010
Date published: August 2011

PUBLISHED BY
Meat & Livestock Australia Limited
Locked Bag 991
NORTH SYDNEY NSW 2059

Knife Sharpening

This is an MLA Donor Company funded project.

Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government and contributions from the Australian Meat Processor Corporation to support the research and development detailed in this publication.

This publication is published by Meat & Livestock Australia Limited ABN 39 081 678 364 (MLA). Care is taken to ensure the accuracy of the information contained in this publication. However MLA cannot accept responsibility for the accuracy or completeness of the information or opinions contained in the publication. You should make your own enquiries before making decisions concerning your interests. Reproduction in whole or in part of this publication is prohibited without prior written consent of MLA.

Contents

		Page
1	Background.....	3
2	Project Objectives	3
3	Evaluation report for entire program.....	4
3.1	Summary of total evaluations	4
3.2	Comments made by trainees	5
4	Review of project methodology and outcomes	6
5	Project dissemination activities and outcomes.....	7
6	Roll-out strategy for future knife sharpening training programs	7
7	Recommendations for future action by MLA, AMPC and MINTRAC, if required	8

1 Background

In February 2009 MLA offered the opportunity to Australian red meat processors to participate in a plant initiated project (PIP) in Knife Sharpening. Specifically, MLA proposed to offer processors the opportunity to train their own trainer(s) and supervisors for a site-wide roll out of this new knife sharpening program. This involves training company personnel in how to train employees in steeling and stoning utilising jigs or setters. The training and the roll out will utilise the services of a qualified trainer experienced in the NZ knife sharpening program.

In April 2009, MLA requested MINTRAC to submit a proposal for the management of the program. MINTRAC will facilitate up to a maximum of 28 two or three-day knife sharpening workshops from July 2009 to July 2010.

Each program will run over two or three days, for example:

- **Day 1.** Existing partner on-site trainers and new knife sharpening trainers to be put through the program and taught how to run the program independently
- **Days 2+3.** Partner on-site trainers to assess and train a selection of staff knife hands under the supervision and guidance where necessary by the external program trainer. These days will also include staff survey/interviews as part of the program evaluation.

As managers of the program, MINTRAC will:

- re-contact plants which have previously registered to participate in the program and agree on dates and locations
- prepare a waiting list of plants who did not previously register, to possibly take the place of plants which drop out of the program
- sub-contract the trainer(s)
- book facilities, meals and equipment as required
- develop plant-based program schedules through consultation with plant management and the trainer
- prepare and maintain attendance records
- issue Certificates of Attendance
- undertake program evaluation.

2 Project Objectives

The key objectives of this project are:

- for on-site trainers and/or supervisors to undertake training in order to be able to effectively train all employees in a standardised knife sharpening and steeling program.
- to train abattoir employees in a proven knife sharpening program working toward reduction in injury numbers and a drop in injury claims.
- to undertake measurement and evaluation resulting in data analysis and recommendations for future activities.

3 Evaluation report for entire program

A total of 143 plant trainers were trained under this program, and during their training they provided training to 53 meat processing employees. Most of the participants were experienced knife hands with over four years of experience in the industry.

3.1 Summary of total evaluations

The following conclusions can be drawn from the cumulative results:

- all participants demonstrated an improvement in knife sharpness as a result of the training received
- all participants demonstrated an understanding of the importance and benefits of having a sharp knife
- nearly all of the participants felt they had learned new techniques at the course and would be able to pass on the techniques learned
- in only one plant did the participants feel that their plant already had good knife sharpening practices in place and most participants felt that there would be changes at their plant as a result of the course
- OH&S statistics collected after a three month period were inconclusive in demonstrating impact of the course
- three months after the course most of the participants indicated that they were more aware of the importance of knife sharpness, had completely changed the way they sharpened their knife and used the techniques every day
- many indicated that they had taught others the techniques and regularly reminded other people to sharpen their knives
- most responders identified an improvement in supervisor awareness of knife sharpness, and two plants reported an impact at management level
- although they felt workers were more aware of the importance of knife sharpness, most participants felt that the impact on their plant had been moderate – minimal. In only one plant did workers indicate that the impact had been ‘massive’
- plant impact had a direct correlation with those plants that had invested in knife sharpening and testing equipment.

3.2 Comments made by trainees

Participants were offered an opportunity to write comments on the evaluation forms at course completion and after three months. Below is a selection of the comments made.

At course completion

- more machines would be great
- did not know how easy to bring back rolled edge
- it has given me more confidence in my knives
- well presented and great resource tools, visual and experience - thanks
- Very well presented with excellent delivery of knowledge
- I think it will take a little time (trial and error) but overall will be better
- Will help others in plant maintain sharp knives
- Allan delivered the training really well, he was easy to understand and knew what he was talking about
- Nice and simple to understand to get great results; I wish this was available when I first started on a knife
- I think everyone can benefit from this course
- It has broadened my knowledge and built some confidence to work alone with a knife
- The course will benefit some people with poor knife skills
- This course is very good for training new slicers

After three months

- In my section (red offal) there is only a few knife jobs so the impact is not very obvious
- Knife sharpening equipment have not been installed - have not had a chance to try techniques
- I feel that once the equipment is installed we will hopefully notice a great step forward, closing the gap between those who have years of experience and new beginners. The steeling techniques are making a difference with my own personal work.
- Found after 14 years of sharpening knives that there is an easier technique
- Enjoyed the course and learnt a lot and have been passing these skills on to others when possible
- Sharpening and steeling technique is more standard across the workforce
- Knife sharpening culture has improved, especially with new employees
- I found the course was good; however I have found myself using the old stones and practices again
- I found the way I sharpened my knife was good. Use some of your input to refine my way of sharpening my knife
- Made me more aware of the importance of keeping a good sharp knife. I have less pain in my hand and wrist
- Course has been very helpful for my knife sharpening skills
- Very well run. Wish we could have had it sooner. Saved lots of pain from RSI injuries

4 Review of project methodology and outcomes

The project methodology has made it possible to assess the impact of the initial training program. These training sessions have been successful with the trainees having reported improved skills and a greater ability to train or coach other workers. The trainers who delivered the courses were well received and course evaluations were also uniformly positive. The course participants have also reported improved knife sharpness in the period after the training.

Likewise the three month report has enabled the assessment of any ongoing benefits derived from initial the training. From these reports it is patently obvious that while this project has been endorsed by the trainees and supervisors the program has only been a success in those plants where senior management has fully embraced the concept, resourced the program with adequate equipment and reinforced the need to train and coach employees in knife sharpening. In such cases the course participants reported improvements in the general knife sharpness on plant.

The plants where the knife sharpening training program has had the greatest impact are those where the plant

- provided adequate and standardized training to new workers
- made the same training available to existing workers
- monitored worker's knife sharpness and have a referral system to a knife coach
- purchased an adequate number of setters for workers to utilize and access easily
- demonstrated a significant commitment to the maintenance of knife sharpening equipment such as setters and stones
- provided an ongoing commitment to ensure workers have sharp knives
- encouraged workers to test their knives on an ongoing basis.

What also becomes very clear from these reports is that where participants reported that the training had a limited impact on knife sharpness on plant program had been starved of resources e.g. not enough setters and stones poorly maintained. One might assume that while the program has been driven by those working at the "coal face" the extent of the problem has been underestimated by senior managers in some plants and consequently the program was starved of resources.

What has been learnt from this project is that this problem of workers using blunt knives will only be fully dealt with at a plant level when senior managers fully appreciate what this costs

- the individual worker in terms of pain and suffering
- the company in terms of OH&S premiums and lost productivity.

Therefore there has to be a more aggressive sell to senior management when tackling this problem to ensure adequate resourcing of knife sharpening facilities as well as training and mentoring on plant. There is no quick fix and no silver bullet to maintaining knife sharpness on plant and a formal structure has to be put in place to ensure adequate physical and human resource are dedicated to knife sharpening. This has been achieved on some plants and the results are reflective of management commitment.

The lack of any quantitative OH&S data from the companies has not allowed MINTRAC to systematically assess the OH&S benefits that can be derived from improved knife sharpness.

5 Project dissemination activities and outcomes

The results of this project are going to be documented in the MINTRACKER and distributed to all meat industry HR and training managers as well as RTO staff. In addition it will be an agenda item and discussed at the training managers network meetings around Australia. At these meetings RTOs will be engaged to discuss how they address this problem on sites and discuss what aspects of the project could be incorporated into their training programs to improve the outcomes achieved. MINTRAC will also actively promote the testing of knives to

- create the awareness of the state of play on individual sites both for management and workers
- the effectiveness of existing training programs.

What is also apparent is that State OH&S authorities are taking an increasing interest in soft tissue injuries caused by the use of blunt knives in the meat industry. Such authorities will be looking on employers to demonstrate how they are taking a systematic approach to ensure knife sharpness on plant. This will mean that they have to have a monitoring program and a demonstrated system for effective training and assessment. Plants who encounter this issue with a State OH&S authority will find the results of this project very useful when developing a corrective action plan. In particular they will be able to identify those management behaviors which will increase the effectiveness of any knife sharpening training program put in place.

The outcomes of this project will also be provided to participants at the meat industry's national OH&S conference in October 2010.

6 Roll-out strategy for future knife sharpening training programs

We now know that the objective testing of knives aids in the training of workers and establishing the nature of the problem with management. For this reason MINTRAC has purchased an Anago knife tester. MINTRAC is hiring the tester and a technician out to employers and RTOs who are using it to

- assess the nature of knife sharpness on plant
- assess the effectiveness of a training program
- assess the competency of individual workers
- promote knife sharpness to the workforce as a whole.

MINTRAC may have increased requests from RTOs and employers to assist in the development of knife sharpening programs in the near future as State OH&S authorities apply greater pressure on employers to demonstrate an effective "duty of care" when it comes to worker knife sharpness.

MINTRAC now has a very clear picture of what works and what does not work when developing and implementing an effective knife sharpening program. This will be of significant use when helping both RTOs and employers develop an effective strategy to training workers.

MINTRAC has also successfully applied for State training funding to be dedicated to knife sharpening training at a state level and this coupled with a clear model for effective implementation will enable this training to be taken up by far more plants.

When achieving cultural change in the industry it is important to have both champions for the implementation of change but clear examples of where the change has been implemented to the benefit of both the company and the workers. We now have both of these and on site visits and workshops can be focused around successful models for changing knife sharpening practices.

7 Recommendations for future action by MLA, AMPC and MINTRAC, if required

Further R&D expenditure on the part of AMPC and MLA into knife sharpening training appears to be unnecessary. The effectiveness of this approach to knife sharpening training and coaching has been demonstrated in plants where there was adequate management support. This largely mirrors the results achieved in New Zealand using a very similar program.

This project makes it possible for a nation wide re-evaluation of the traditional approach to knife sharpening training. RTOs and employers have the ability to

- objectively assess the competency of individuals
- the effectiveness of training programs
- the overall competency of a workforce in maintaining knife sharpness.

This means that RTOs and their client employers can measure the effectiveness of the training and modify their approach if it is not initially effective.

MINTRAC can now promote and advocate a model for knife sharpening training which has been tested and proved. MINTRAC will have an ongoing role in improving the knife sharpening training techniques of industry trainers around the country through its professional development program. MINTRAC will also need to provide ongoing support to employers seeking to address this issue and improve knife sharpening on plant.