

## Trimming

TECHNOLOGY SUMMARY	
<b>Status</b>	Currently available
<b>Location</b>	Abattoir slaughter floor
<b>Intervention type</b>	Spot contamination removal
<b>Treatment time</b>	Variable
<b>Regulations</b>	Approved
<b>Effectiveness</b>	If performed well, can be very effective
<b>Likely cost</b>	On-going labour cost
<b>Value for money</b>	Good, but labour may be expensive
<b>Plant or process changes</b>	Can be done on any existing slaughter floor where space permits. Requires considerable labour May need some additional work platforms
<b>Environmental impact</b>	Waste trim is produced
<b>OH&amp;S</b>	Trimmers will be working with knives, and may be working on raised platforms
<b>Advantages</b>	Can be combined with final QA inspection No major capital cost but may need some extra work platforms (e.g., rise and fall type)
<b>Disadvantages or limitations</b>	Unskilled trimmers can remove/waste valuable product Heavy trimming may affect compliance with product specifications e.g. AUS-MEAT standards Can lead to surface meat drying in chillers if all fat removed down to bare meat without protective muscle membrane

### Disclaimer

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## Trimming

Since 1994, AQIS has prescribed 'zero tolerance' for visible contamination of the carcass by ingesta, faeces, milk and urine (AQIS Notice, 1994). Trimming of the affected product is an acceptable corrective action, and can be combined with other technologies to help to remove contamination.

Carcass trimming has previously been reported to be effective in reducing the aerobic plate count (by 3 log cfu/cm<sup>2</sup>) and *E. coli* O157:H7 (by 3.1-4.4 log cfu/cm<sup>2</sup>) on carcasses (Castillo *et al.*, 1998; Hardin *et al.*, 1995; Prasai *et al.*, 1995). However, when trimming was used in conjunction with washing, it was found that the microbiological status of the carcasses was substantially poorer than those carcasses that were trimmed only. This might be due to cross-contamination during the washing process (Prasai *et al.*, 1995). Gill *et al.* (1996) have also found no conclusive evidence that trimming and washing could improve the microbiological status of carcasses. Despite these, Reagan *et al.* (1996) has shown that both trimming and washing caused greater reductions of the aerobic plate count than using either treatment alone. It is, therefore, thought that the effectiveness of trimming and washing depends very much on the skill of the operator, the extent of visible contamination compared with non-visible contamination, and the temperature, angle and pressure of the wash waters used in each of these studies.

In addition to the personnel required, trimming involves costs to the industry in loss of carcass meat removed during trimming, followed by possible loss of the underlying surface, as it may dry during chilling and become aesthetically unacceptable. Excessive trimming can also downgrade the resultant cuts of meat through removal of the surface fat and tissue that may be important factors in complying with commercial specifications. Manual trimming requires personnel, protective clothing and good lighting, and the contaminated material removed must be disposed of properly.

## References

- Castillo, A., Lucid, L. M., Goodson, K. J., Savell, J. W., Acuff, G. R. (1998) Comparison of water wash, trimming, and combined hot water and lactic acid treatments for reducing bacteria of fecal origin on beef carcasses. Journal of Food Protection **61**: 823-828.
- Gill, C. O., Badoni, M., Jones, T. (1996) Hygienic effects of trimming and washing operations in a beef-carcass-dressing process. Journal of Food Protection **59**: 666-669.
- Hardin, M. D., Acuff, G. R., Lucia, L. M., Omen, J. S., Savell, J. W. (1995) Comparison of methods for decontamination from beef carcass surfaces. Journal of Food Protection **58**: 368-374.
- Prasai, R. K., Phebus, R. K., Garcia Zepeda, C. M., Kastner, C. L., Boyle, A. E., Fung, D. Y. C. (1995) Effectiveness of trimming and/or washing on microbiological quality of beef carcasses. Journal of Food Protection **58**: 1114-1117.
- Reagan, J. O., Acuff, G. R., Buege, D. R., Buyck, M. J., Dickson, J. S., Kastner, C. L., Marsden, J. L., Morgan, J. B., Nickelson II, R., Smith, G. C., Sofos, J. N. (1996) Trimming and washing of beef carcasses as a method of improving the microbiological quality of meat. Journal of Food Protection **59**: 751-756.