

<b>Title</b>	<b>Describe hot, warm, and cold boning techniques, carcass yields and post boning packaging and presentation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of the techniques associated with hot, warm, and cold boning; describe hot, warm, and cold boning techniques that maximise carcass yield; and describe post boning packaging and presentation requirements.
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<b>Classification</b>	Meat Processing > Boning Operations
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
  - Health and Safety at Work Act 2015;
  - Animal Products Act 1999;
  - and any subsequent amendments.
- 2 Resources documents include but are not limited to – *Post slaughter activity Red Meat Code of Practice Chapter 9*, available from the Ministry of Primary Industry at <https://www.mpi.govt.nz/processing/meat-and-game/meat-and-game-processing/codes-of-practice-rmp-templates-and-plans/>.
- 3 Definitions
 

*Company specifications* – product specifications set by the company relating to cuts, weights, presentation, and packaging.

*Customer specifications* – product specifications set by clients relating to cuts, weights, presentation, and packaging.

*Hot, warm, and cold boning techniques* – processes other than de-boning carcasses that may be completed outside the boning department and affect meat quality and yield. These processes may include – spray chilling, blast freezing or chilling, electrical stimulation, plate freezers.

*Quality requirements* – customer requirements regarding shape, trimming, colour, and weight.

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of techniques associated with hot, warm, and cold boning.

**Performance criteria**

1.1 Compare hot, warm, and cold boning techniques in terms of production and process flow.

1.2 Compare hot, warm, and cold boning techniques in terms of cost and productivity to a meat processing operation.

Range cost and productivity may include but is not limited to – weight loss, drip loss during normal packing, chiller space, refrigeration, processing time from slaughter to load-out, capital cost for buildings, labour, transport, yield, occupational overuse injuries, hard fat problems; evidence of four examples are required.

1.3 Explain dynamics of hot, warm, and cold boning techniques in terms of processing requirements.

Range dynamics include but are not limited to – synchronisation of the slaughter of animals and chain speed, hygiene requirements, air temperature and velocity, timing of the grading of the carcass, electrical stimulation, spray chilling.

1.4 Explain the effects and causes of hot, warm, and cold boning techniques on meat products in terms of product quality requirements.

Range quality characteristics include but are not limited to – tenderness, shape, appearance, pH levels, muscle shortening.

1.5 Describe control of hot, warm, and cold-boned meat products in terms of contamination and product cooling rates.

Range control includes but is not limited to – rate of temperature reduction, e-coli cooling rates.

**Outcome 2**

Describe hot, warm, and cold boning techniques that maximise carcass yield.

**Performance criteria**

2.1 Describe boning knife handling techniques with reference to potential improvement in carcass yield.

Range knife handling techniques include but are not limited to – sharpening and steeling, cutting edge angles, training, knife blade length.

2.2 Describe boning techniques with reference to potential improvement in carcass yield.

Range improvements include but are not limited to – removal of fat, trimming, evaporation losses, chilling durations, vacuum packing, temperature tolerances, evaporator fan speeds, positioning of carcasses in chillers.

### Outcome 3

Describe post boning packaging and presentation requirements.

#### Performance criteria

3.1 Describe packaging processes and aids used to maintain product shape in terms of customer requirements.

Range packaging processes and aids include but are not limited to – cardboard inserts, wrapping individual product, number of pieces per carton, positioning of products in cartons.

3.2 Describe procedures for packing product into cartons for hot, warm, and cold-boned products to ensure presentation is maintained to meet customer specifications and company specifications.

3.3 Describe packing of boned product in terms of carton weights and maximisation of container loading.

<b>Planned review date</b>	31 December 2024
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 May 2008	31 December 2012
Review	2	21 July 2011	31 December 2018
Review	3	27 January 2015	31 December 2021
Revision	4	17 September 2015	31 December 2021
Review	5	24 October 2019	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0033
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

#### Comments on this unit standard

Please contact the Primary Industry Training Organisation [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.