

Update of 'A Better Way'

Project 2019-1066

J. Jolley, A. Kiermeier, J. Sumner

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A Better Way (ABW)

ABW is a series of AMPC projects aimed at modernising how our industry monitors:

1. Microbiological quality of meat products
2. Visual defects on product

Today is an update of where the projects sit.

Historical background

- Linkage between traditional inspection and meat microbiology exposed in 1980s by NZ veterinarians
- Opportunity for Australia to reform in 1990 – Paul Keating invokes “user pays” on Australian companies for inspection
- MRC project establishes company inspection (1993)
- Export industry begins attempts for company inspection (1995)
- Change difficult following hamburger O157 outbreaks in USA
- Meat Hygiene Assessment started in 1993
- ESAM started in 1997
- Second edition of MHA in 2002

Proposed changes for ESAM

Current

- 1 in 300 carcass (TVC, *E. coli*); 1 in 1500 *Salmonella*
- 1 in 300 carcass equiv. carton test (TVC, coliforms)
- No primals or offal

Proposed

Industry and DA examined options and settled on a shift from:

- Testing carcasses only
- Testing all products

Proposed System – Carcasses, bulk meat, primal and offal

- Sampling frequency: 1 in 1000 (bovine) and 1 in 3000 (ovine and porcine) carcass equivalent.
- Testing for TVC and *E. coli*
- No *Salmonella* testing
- New performance criteria:

	TVC			E. coli		
	n	c	m-limit	n	c	m-limit
Carcass	15	1	10,000	15	1	100
Bulk meat	15	1	100,000	15	1	100
Primals	15	1	100,000	15	1	100
Offal	5	3	1,000,000			

Potential savings – A Lamb Exporter

	Currently	Could be
ESAM carcass testing	\$113,610	\$30,000
Carton trim testing	\$47,071	\$15,785
Primal testing	NA	\$15,785
Offal testing	NA	\$15,785
Total	\$160,681	\$77,355

Proposed System – where is it?

- Approved by industry and DA in December 2018
- Work passed from SARDI to AMIC and DA
- Draft submission with DA to advance with overseas agencies

Visual monitoring

Recap:

- Meat Hygiene Assessment started in 1993
- Second edition of MHA in 2002
- Reverse engineering of US import inspection

USA and other countries have changed their requirements over the years and now is a good time to examine our options.

What do other countries do?

USA

- Zero Tolerance at final carcass inspection of primary importance
- Rely on decontamination by interventions so assess cuts, folds and flaps
- Companies encouraged to develop their own system

New Zealand

- Focus on ZTs immediately after evisceration
- All ZTs must be removed
- Relate manufacturing meat and primal monitoring to throughput

EU

- *“All visible contamination e.g. faeces or other matters, has to be removed before cooling and before applying the health mark on the carcass.”*

What do we need to change?

We should be:

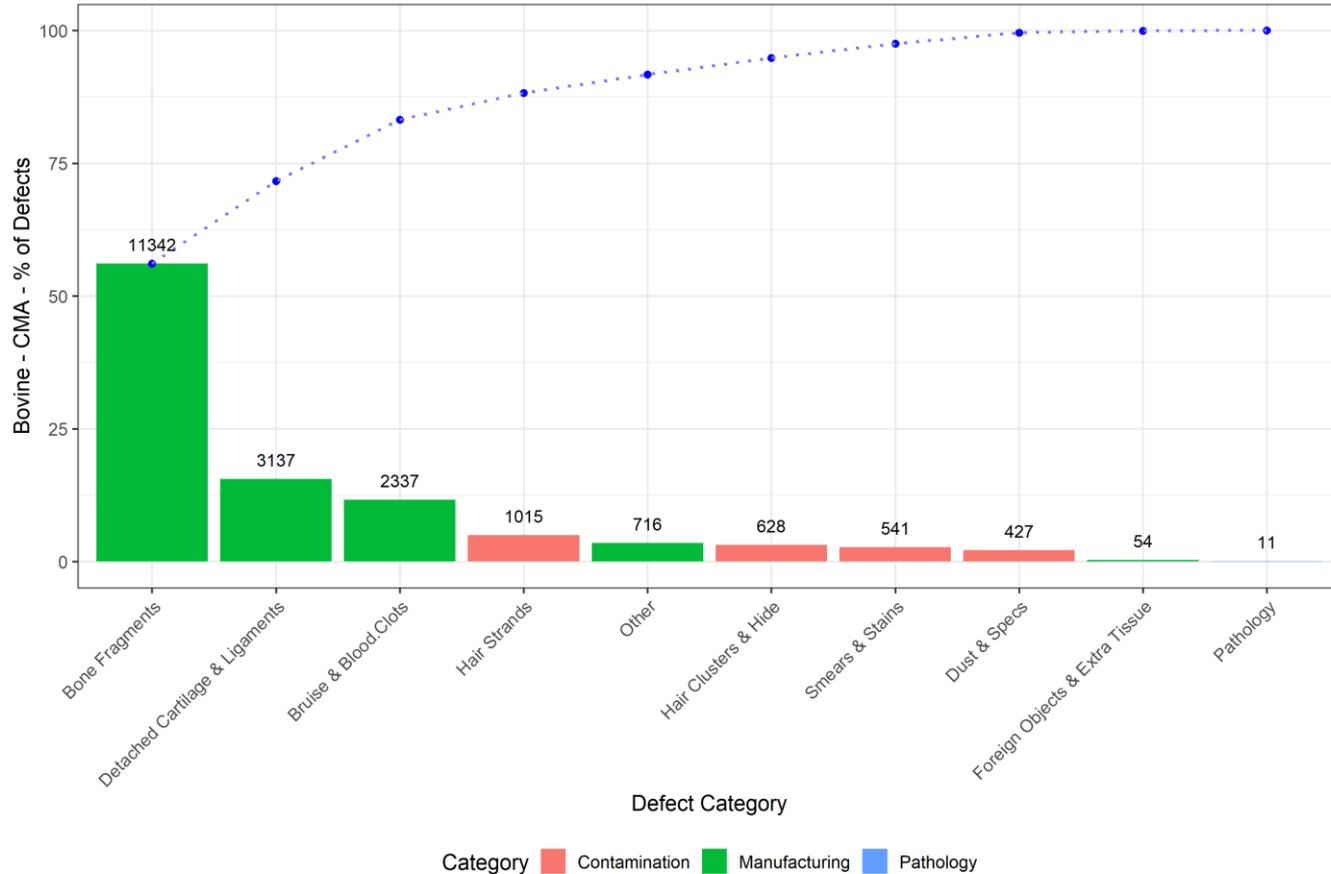
- Moving from intensified sampling (punishes the messenger).
- Removing processing defects from the list of defects (e.g. bone chips, cartilage).
- Reducing the rate of carton meat inspection, particularly for things like denuded cuts.
- Focusing CMA on high risk products.

Options for a visual monitoring system

1. Removal of manufacturing defects from regulatory monitoring

Manufacturing	Contamination	Pathology
Bruises and blood clots	Rail dust, specks, hide and wool dust	Pathology
Seeds	Smears and stains (inc. bile, oil and grease), discoloured areas	
Bone fragments	Hair and wool strands	
Detached cartilage and ligaments	Hair and wool clusters, hide, scurf and toenails	
Foreign objects and extraneous tissue	Off condition	
Scar tissue		
Other		

Options for a visual monitoring system



Options for a visual monitoring system

2. 100% checking and recording of carcasses for ZTs at MHA stand, but nothing else (for regulatory purposes)

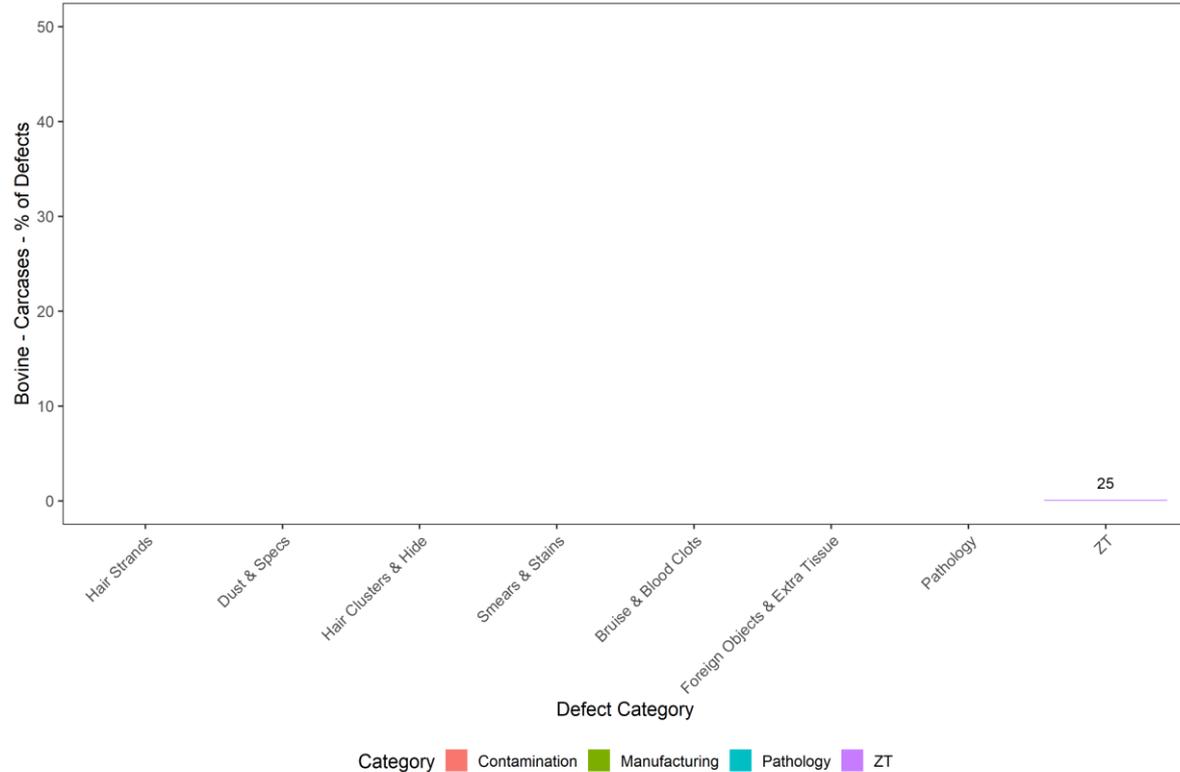
Number of carcass ZTs from the industry trial

	# of carcasses	# of ZTs	Prevalence (%)
Beef	6,057	25	0.4%
Sheep	3,693	17	0.5%
Pigs	1,762	14	0.8%

- This is what NZ do.

Options for a visual monitoring system

2. 100% checking and recording of carcasses for ZTs at MHA stand



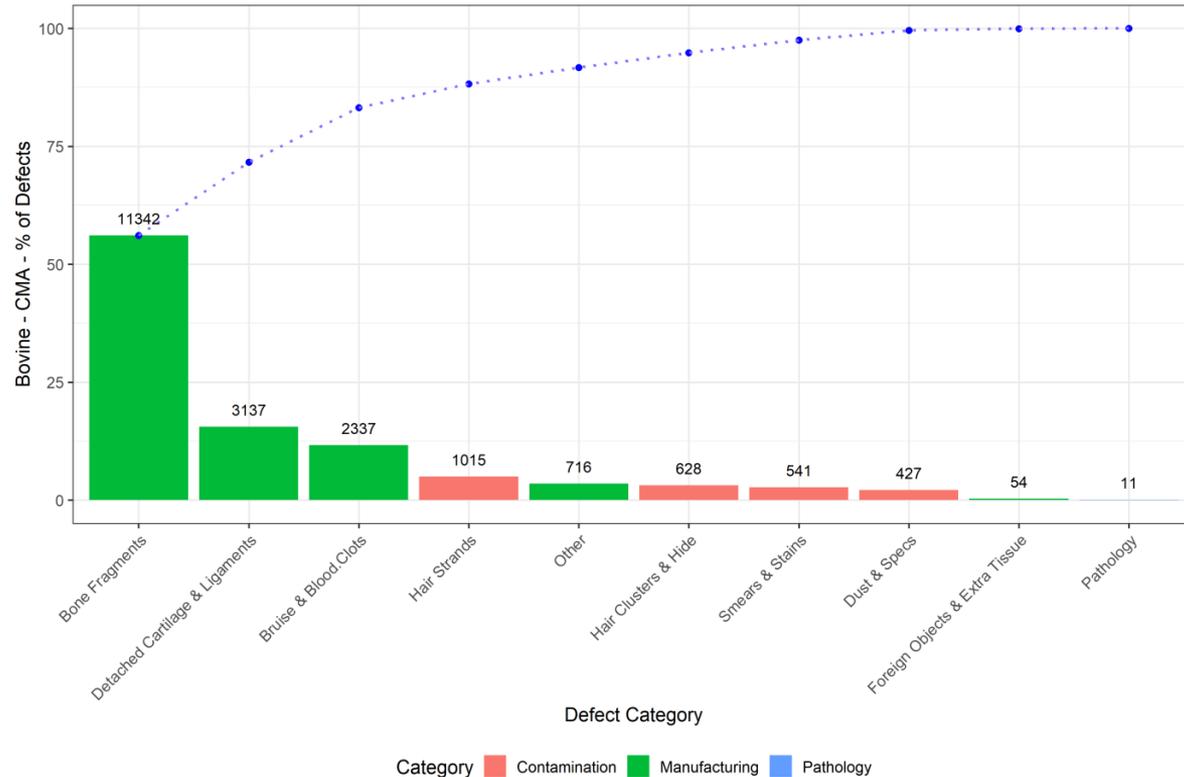
Options for a visual monitoring system

3. Removal of Carton Meat Assessment (as per Pearse 2012 review)

“Carton meat assessment and offal product and process monitoring are not adding value to the MHA data set but are obviously important aspects for the company to monitor; these activities will be deregulated and removed from MHA.”

Options for a visual monitoring system

3. Removal of Carton Meat Assessment (as per Pearse 2012 review)



Options for a visual monitoring system

4. Focus on 'high risk' lines for primals and offal, not a blanket approach to all product types

An approach could be that each establishment determines:

- 'High risk' product lines for primals and offal (defect categories + prevalence)
- Implement a regular sampling plan for these product lines
- Less-intense monitoring program for lower risk product lines

Options for a visual monitoring system

5. Consistency in scoring systems

If CMA is retained, CMA could also be based on an average defect score, thus harmonising the various components of visual assessment.

Options for a visual monitoring system

6. Consistency between definitions of minor/major/critical

	Minors		
	Carcase	CMA	Offal
Bruises Blood Clots	2-5cm	≤6cm & 2cm deep 4-15cm	<1cm
Seed	5-10	≤ 3	NA
Rail Dust, Specks, Hide & Wool Dust	5-10 scattered specks	5-10 scattered specks	NA
Smears & Stains	≤1 cm diam	1-4cm	<1cm
Hair & Wool Strands	5-10 strands	5-10 hairs	≤2
Hair & Wool Clusters, Hide, Scurf, Toenails	1 cluster of hair Hide < 1cm diam	1 cluster of hair Hide < 1cm diam	1 (cluster is numerous strands in a 10mm circle)
Foreign Objects & Extra Tissue	1 incidence	Harmless material <4 sq cm	1 incidence

What might a good visual product inspection system look like?

For regulatory purposes, a good VPIS would:

1. Be integrated with a real-time process monitoring system
2. Monitor only ZTs on carcasses and record against a performance standard
3. Monitor and record only ZTs on pieces of meat
4. Remove all ZTs

For business purposes, a good VPIS would:

1. Monitor final products at a frequency aligned with likelihood of contamination with defects of importance to the business.
2. Maintain a record and control system.

Next Steps

- Industry workshops (Melbourne, Brisbane) – November 2019
- Further analysis and development of an alternative system
- Workshop – Industry and DA
- EMIAC – Food Safety and Animal Health Subcommittee
- Briefing of DA
- Final report and recommendations for DA to progress with overseas agencies