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Fit & Feeling Good – AWO Update, Autumn 2016

Dear Feedlot Animal Welfare Officer,

Ensuring good animal welfare outcomes is a priority for the Australian cattle feedlot industry. This newsletter has been developed to provide support and information on the successful implementation and auditing of good animal husbandry practices on your feedlot.

Update on progress of the Animal Welfare Officer Training Assessments

Congratulations to all participants that successfully completed the assessment and met all the requirements for the AWO skill set. You should have received your Certificate of Attainment for the AWO Skills Set in December or early January. If it hasn't turned up yet please contact Jeff House at jeff.house@feedlots.com.au.

ALFA is planning to run further AWO training courses in the second half of 2016 for those feedlots and feedlot staff that missed out this year. Details will be posted on the ALFA online Events Calendar at www.feedlots.com.au – be sure to keep an eye out for when registrations open.

What are some of the potential animal welfare issues that you should be addressing this autumn season?

- Autumn is the peak period for incidences of bovine respiratory disease on feedlots, largely due to the increased incidence of stress from fluctuating weather conditions. Preventative practices to consider during this high risk period are listed below in the MLA R & D snapshot.
- Now is also a great time to carry out pen maintenance. Pens that are likely to collect excessive water or mud over the wet winter period affect animal comfort, performance and predispose animals to lameness and feet problems. It is critical, particularly in areas of typical winter rainfall, that pens are freshly cleaned and maintained pre winter to prepare for prolonged periods of wet and cold. Often these conditions limit access of pen cleaning machinery and further pen cleaning. Wet and cold conditions also present challenges for hospital cattle. Consider the use of bedding such as wood chips in these pens to aid cow comfort in these areas. A MLA report (Feedlot Bedding Study [B.FLT.0237 Final Report](#)) is now available which documents the outcomes from a series of trials conducted at feedlots around Australia, with the aim of determining the most appropriate bedding type and placement for particular situations and quantifying, as best as possible, the benefits obtained from its use.
- With the risk of excessive heat load events reducing as the temperature cools, now is a good time to sit down with your staff to review your Heat Load Action Plan while it is still relatively fresh in your mind. Even if you didn't experience an excessive heat load event, it is worth asking if there were any pens where animals seemed to be more affected than others and how you can reduce this impact when preparing for next summer.

Animal welfare in the news

A recently published paper on beef cattle transportation issues in the United States written by Dan Thomson of Kansas State University is a good example of using the HACCP approach to defining an animal welfare issue and the metrics involved. The paper looked at carcass bruising during cattle transport to slaughter and some of the risk factors associated. Interestingly, the authors regarded carcass bruising as not only a source of wastage and devaluing to a beef carcass, but also as an indicator of sub-optimal animal welfare.

The National Beef Quality Audit (NBQA) of 2011 evaluated 18,000 carcasses and observed (a massive) 23.0% with bruising; 18.8% with 1 bruise, 3.4% with 2 bruises and 0.9% had 3 or more bruises. The location of the bruising occurring down the midline accounted for 50.1%, occurring at the rib for 21.3%, 13.8% on the chuck, 7.3% on the round and 7.5% was located on the flank / plate / brisket. The results from this audit have improved over time; 1991, 1995, 2000 and 2005 had bruising rates of 39.2%, 48.4%, 46.7% and 35.2% respectively, indicating animal handling and facilities have improved – but – there is still much further to go.

Bruise location and shape is often associated with the causative agents. Examples of causative agents include handling, use of driving aids, facilities and cattle with horns. Two researchers – Barnett et al and Jarvis et al – reported small mottled bruising was caused by the end of a driving stick, while bruises associated with horns are linked to circular shaped bruises. Shaw et al reported bruising trim losses to be almost doubled for horned cattle vs polled cattle (8.8kg vs 5.5kg). Jarvis et al found that cattle transported further than 64km to an abattoir had significantly more bruising than cattle sourced closer. Further research in this area discovered other sources contributing to carcasses bruising; for example, space allowance on trailers. Cattle stocked at the recommended level in the US (1.16m² per animal) specified by Grandin, presented significantly less bruising at the abattoir than low and high stocking density groups.

McCausland and Millar suggested handling prior to slaughter has an effect on the prevalence of carcass bruising at the time of slaughter. Barnett et al observed cattle subjected to stressful handling procedures were more susceptible to carcass bruising. Grandin observed cattle originating from feedlots with rough handling techniques resulted in increased bruising compared to feedlots with quiet handling techniques (15.5% vs 8.35%). Another source of bruising has been reported to be from the number of times animals are handled before their final destination, the abattoir. McNally and Warriss observed animals sourced from sale-yards had a bruising prevalence of 7.8%, sourced from a trader 6.3% and sourced directly from farm = 4.8%

While many of these findings agree with intuition and common sense, there is a value in making measurements of these negative outcomes – in this case bruising – such that any changes to handling techniques, employee training, facility design etc can be demonstrated. This is the backbone of the HACCP approach to managing animal welfare on our feedlots.

TONY BATTERHAM, BVSc.DipVetClinStud.

Learnings from AWO training proving valuable in planning and prioritising continual improvements on JBS Australia's Beef City Feedlot

Whilst animal welfare is always at the forefront of our operations, the participation of 4 staff members in the Animal Welfare Training in 2015 from JBS Australia's Beef City Feedlot highlighted the constant need for monitoring the critical control points within our business.

Over the last couple of years several key hazards have been identified.

The cattle weighbridge which all incoming and outgoing cattle must cross was identified as being a slip and fall risk. To reduce the risk woven rubber matting was installed over the length of the bridge. This has had a positive impact on the amount of slips and falls occurring in this area with a direct animal welfare improvement and benefit occurring. The matting has proved hugely successful with plans to utilize it in the induction shed tub.

A greater use of rubber matting at induction facility within the race in addition to the area immediately after the front of the crush will help prevent injury. Protection of the animal's hoof will lead to minimising risk of foot/ leg infections caused by the induction process.

As well as the structural improvements considerable effort has been put into improving animal handling techniques with formalised training occurring for all staff. This training focused on effective and efficient livestock movements throughout our feedlot system with minimal noise and no physical contact with the cattle. Training included utilising handler positioning, movement and skill to achieve better outcomes. Consistency in the use of these techniques across the whole team has been a notable outcome also.

In addition to the training in techniques a review of infrastructure was also undertaken. In this we looked at the flow of the cattle within the yard and made several changes to the path and manner of taking cattle from the Induction shed to their home pens and then from the home pens to minimise the risk of injury, trips, falls.

The training received by 4 staff members to be Animal Welfare Officers has been valuable in planning and prioritising future developments to continue to reach the high standards we expect within the feedlot industry

As a business we were doing a lot of things well but the training has helped to put some structured focus on the areas of opportunity and helped with continued monitoring of our critical control points

Ben Wade

Livestock Supervisor

JBS Australia - Beef City Feedlot

Meat & Livestock Australia R & D Snapshot - BRD Preventative Practices

Bovine Respiratory Disease (BRD) is the leading cause of morbidity (sickness) and mortality (death) in Australian feedlots. Autumn is the peak time for BRD incidence in feedlots. MLA will release a BRD Preventative Practices Manual in April 2016 to assist feedlot operators in managing this disease. Key take home messages in this manual include:

- Avoid placement of cattle in the feedlot if purchased through saleyards within the previous 12 days and if backgrounding paddocks are available do not place the cattle in the feedlot for at least 28 days to confer a protective effect against BRD.
- With cattle placed directly in the feedlot, reduce the number of purchase groups per pen.
- Fill pens as quickly as practical, ideally within 1 day.
- Minimise the distance cattle are transported to the feedlot and the time taken for delivery.
- Yard weaning when possible.
- Mass medication of high risk cattle where the other preventative measures have not been possible.

- When constructing new pens or replacing water troughs, provide separate water troughs for each pen.
- Avoid high concentrations of non-protein nitrogen in starter diets.
- Provide dietary vitamin E at the upper range of the National Research Council recommendation of 60 IU/kg diet DM, but no greater.
- Provide dietary zinc at a basal concentration of 30 mg/kg diet DM for the duration of the feeding period and provide additional zinc in an organic form at 45 mg/kg diet DM for the first 28 days, to achieve a total dietary zinc concentration during the adaptation phase of 75 mg/kg DM.
- Vaccination with modified live BHV 1 (Rhinogard) vaccine at feedlot entry.
- Two injections of Bovilis MH at 4 wk intervals before feedlot delivery.
- Two injections of Pestigard at 4 wk intervals before feedlot delivery.

In recent years more BRD vaccines have come onto the Australian market. Given the lack of published data evaluating their efficacy, MLA is currently funding a backgrounding vaccination trial, with results to be finalised by 2017.

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