Welfare in the red meat industry – Challenges to producer adoption of best practice and standards variation by Margo Sullivan

Introduction

The adoption of best practice across the red meat industry has always had its limitations. Across the supply chain there have been varied responses to introduction of new practices and changes to the old. In regard to producer adoption of new and changing practices there have been significant challenges especially in the case of animal welfare. The feasibility of implementing new practices is often limited by scale, financial capabilities and access to resources; however, inapplicability and unfamiliarity have been proven to be just as limiting. A growing demand for transparency across all sectors of the supply chain and ever-increasing pressure from consumers is driving a greater need for adoption by producers themselves. Education, provision of financial support in the form of bursaries/grants and resources are becoming increasingly available, so what is it that is challenging widespread adoption? How can industry work to take down the barriers that are limiting the expansion of development that is so important for future success?

What is Welfare?

According to the American Veterinary Medical Association [AVMA], welfare is:

"how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific research) it is healthy, comfortable, well-nourished, safe, able to express innate behaviours, and if it is not suffering from unpleasant states such as pain, fear and distress".(AVMA. (2010)).

Conflicting opinions on animal welfare often arise surrounding animal husbandry which is not included in the 'state' of the animal as mentioned above, (AVMA. (2010)). There are conflicting opinions between not only animal rights groups but also within the red meat industry itself.

The Five Freedoms are terms often used to define/asses the welfare of an animal. The five are as follows, (ASPCA. (n.d.)):

- 1. Freedom from Hunger and Thirst physiological
- 2. Freedom from Discomfort (shelter from the elements) physiological
- 3. Freedom from Pain, Injury and Disease (by prevention and rapid diagnosis) physiological
- 4. Freedom to Express Normal Behaviour (sufficient space, proper facilities and company of their own species) psychological
- 5. Freedom from Fear and Distress (ensure conditions and treatment avoid mental suffering) psychological

Measuring welfare can be difficult due to the subjective nature in which it is assessed. So what one may see as poor welfare is not necessarily considered poor welfare by another. For example: the housing of cattle or sheep indoors may be seen as compromising welfare as the animal no longer has the 'freedom' to express normal behaviour by grazing; however, it may be considered that this

improves welfare as the animals now have 'freedom' from discomfort as they have shelter from the elements.

The physical and psychological health of an animal can be used as an indication of an animals long-term and short-term welfare, (Duncan. I.J.H. (2005)). An animal's behaviour can be assessed to provide a strong indication of short-term welfare; however, it is noted that an animal lacks the ability to make choices pertaining to their long-term welfare. For example, a cow may choose to graze only clover as it provides short term enjoyment; however, she lacks the ability to foresee the complications following including bloat and thus reduced welfare (Duncan. I.J.H. (2005)).

An animal's 'feelings' can be measured indirectly using motivational and preferential testing; however, the measurement of these 'feelings' is subjective. A positive feeling relates to a pleasurable experience where a negative feeling relates to an animal suffering. Within this stress responses can be used to assess welfare, cortisol levels in the blood can be directly measured to determine the severity of a stress response. It is known within the red meat industry that stress in livestock can result in reduced production and performance and ultimately product quality.

Best Practice

'Best practice' is referring to a procedure or technique that provides the most optimal results as proven by research and experience. Once proven to be 'best-practice' there is often a push to have procedures implemented widely across industry; however, despite providing optimum results there is often reluctance to uptake such practices (Merriam-Webster. (n.d.)).

In the red meat industry, information on best-practice welfare standards for producers are widely available. The Commonwealth Scientific and Industrial Research Organisation [CSIRO] provides a 'Model Code of Practice for the Welfare of Animals' for sheep, cattle, pigs and many other species. Meat and Livestock Australia [MLA], Australian Animal Welfare Standards and Guidelines and the state/territory Governments all provide information on 'best-practice' standards as well as welfare regulations. In the United States the United States Department of Agriculture [USDA], National Cattlemen's Beef Association [NCBA] and AVMA all provide welfare guidelines and best practice; however, despite this there are still scenarios in both the United States and Australia where producers do not adopt best practice welfare.

Challenges to Producer Adoption

In 2012 a Canadian study was undertaken to ascertain the views of commercial beef producers on animal welfare by interviewing 23 producers from various sized production systems. It was found that many producers saw 'comfort' and 'contentment' within animals as essential; however, the term welfare had developed negative connotations due to its use within the space of animal rights movements, (Spooner. J.M., Schuppli. C.A., & Fraser. D. (2012)). In 2009 the Italian Journal of Animal Science published a paper "Positive Indicators of cattle welfare and their applicability to on-farm protocols" that indicated research in the animal welfare space often sees a focus on the negative aspects/indicators of welfare.

All participants of the Canadian study acknowledge the pain and stress that comes with the husbandry practices used such as dehorning, castration, branding, weaning and vaccination; however, the perceived extent of the pain and stress varied greatly (Spooner. J.M., Schuppli. C.A., & Fraser. D.

(2012)). The variation from "if you give me a better way, I'll do it" to "We can see that it didn't hurt much because everything is fine again", "do it young and they don't remember" and "It doesn't hurt for long" outlines the degree of disparity between producers and their opinions on an animal's suffering (Spooner. J.M., Schuppli. C.A., & Fraser. D. (2012)). It is difficult to convince a producer of the latter opinions to implement 'best-practice' welfare if it is not an area they personally see as a welfare concern. In 2016, Meat and Livestock Australia surveyed Australian producers on cattle and sheep husbandry practices. 51 per cent of cattle producers asked "Why don't you use pain relief?" responded that it was 'not necessary/no need/use quick...', ((Howard. K, Beattie. L. (February 2018b)). This again outlines the differing opinions amongst producers on the need for pain relief during husbandry procedures.

Hobby farmers (individuals who do not derive a living from the livestock they run) were considered by participants in the Canadian study lacking the time and expertise to make the best management decisions for their livestock. There was also a level of frustration in the lack of contribution made by hobby farmers to industry, (Spooner. J.M., Schuppli. C.A., & Fraser. D. (2012)). On the 2020 Intercollegiate Meat Judging Tour, this frustration was also echoed by producers, sale barns, feed yards and industry groups. The small scale of hobby farms also makes it difficult to see any incentive in improving welfare standards as the size does not allow a measurable gain.

Speaking to producers and others involved with the United States red meat industry, it was made clear they needed to see a benefit for implementing 'best-practice' welfare. The cost of implementing practices such as anaesthesia for husbandry (dehorning, branding, castration) is significant (a veterinarian is often required). It also makes the process more time consuming. This need to see a financial benefit was again echoed in the Canadian study. Producers in the study indicated they would willingly implement best-practice and changes to existing practice; however, it is a cost they would expect the consumer to wear. Producers emphasized they would never reduce their current levels of care to save money; however, extreme levels of care need to provide payment, (Spooner. J.M., Schuppli. C.A., & Fraser. D. (2012)). In 2015 Dawkins. M.S. stated,

"The true commercial value of good welfare needs to be documented at both producer level and societal level so that animal welfare is no longer seen as just an 'ethical extra' but as having commercial clout in its own right. As argued earlier, this does not remove ethical values from animal welfare but it does strengthen the case for good welfare in the eyes of people who would not otherwise be convinced by ethical arguments alone"

Furthering the argument that a financial return needs to be proven when asking producers to improve welfare standards beyond current practices (Dawkins. M.S., (July 2015)).

In the 2016 MLA surveys it was observed that just 56 per cent of cattle and sheep producers were aware of the Animal Welfare Guidelines associated with cattle and sheep. It was also found only 60 per cent of sheep producers and 54 per cent of cattle producers were aware of the 'Is it fit to load' guide, ((Howard. K, Beattie. L. (February 2018a), Howard. K, Beattie. L. (February 2018b)). A lack of awareness of current guidelines could be expected to hinder the uptake of best practice.

Incentives for Adoption

There is a strong need for a financial payback to be demonstrated in order to encourage more producers to implement best practice and adopt changes to current practices. The way in which a financial gain can be seen; however, is not just monetary. Benefits that can be seen from implementing best practice welfare standards are improved health, reduction in mortality, improved quality of product, disease resistance, reduced use of medications, lower disease incidence and an ability to command increased prices (Dawkins. M.S., (July 2015)).

It is important that as best-practice standards and their variations are released to clearly demonstrate how the gains translate into financial benefits. Providing a clear statement on welfare as well as financial benefits has the potential to greatly improve uptake of practices.

An incentive that comes without a financial gain is producer satisfaction (Dawkins. M.S., (July 2015)). This will not be enough to motivate all producers to implement change; however, for some producers the sense of doing the 'right-thing' by their animals can encourage adoption. In the Canadian study it was found that producers felt a strong responsibility to protect their livestock and ensure they were well cared for. For some of these producers they would implement new practices readily for the sole purpose of improving the life of their animals.

Legal or regulatory enforcement gives producers no other choice than to leave or change their welfare standards. On October 1st 2019, New Zealand introduced new laws requiring all dehorning and disbudding procedures to be performed using a local anaesthetic. It had been strongly encouraged by industry and veterinarians for producers to use local anaesthetics as best practice welfare well before the regulations changed. Many producers had adopted the use of anaesthetics; however, for those who had yet to implement the practice it is now compulsory. Failure to use anaesthetics when disbudding or dehorning is now a criminal offence in New Zealand (The Country. (September 2019)). As well as changes to the legality around welfare concerns, there can also be regulations placed on producers by buyers/large companies. In the United States Tyson Foods, have implemented the FarmCheck® program. This program audits their suppliers of beef cattle in order to ensure they are meeting the welfare requirements set out by the company. In 2018, 122 beef audits and 237 pork audits were undertaken. The size of the company has allowed them to push producers into implementing best practice welfare in order to maintain the ability to sell to Tyson. The beef packing industry in the United States is very consolidated allowing the big packing companies to hold sway on producers and encourage best practice animal welfare

Methods for Adoption/Change

The increased availability and development of technology is making implementation of best-practice easier and easier; however, the development of new technology can be a challenge for producers who are not familiar with products. A lack of understanding when using technology can cause frustration and consume large amounts of time. Obtaining technical support can also be difficult especially in remote and rural areas. The most advanced technologies are also costly which makes producers (especially small scale) reluctant to make the initial investments.

Industry led initiatives or programs headed up by large companies had the ability to see best-practice implemented more widely. Speaking to Temple Grandin on the 2020 ICMJ US tour, it was commented that the big companies could provide the means to implement widespread change/adoption of welfare standards due to their saturations of the market. There is a need for producers to see financial

benefit in implementing best practice, while it is always commented a premium needs to be offered for those who meet higher standards it would have the same effect to apply a discount to those who do not.

Genetics can be used to improve welfare standards. Selecting genetics for polled cattle for example removes/reduces the need for disbudding/dehorning. Similarly selecting animals with correct structure reduces the likelihood of lameness occurring, particularly in a feedlot supply chain. Genetic selection can be a very good tool for improving overall welfare of animals; however, pushing animals genetically can create problems if superior performance is not balanced with welfare outcomes. This is especially important where focus is placed on pushing maximum performance with less space, less food and lower cost (Dawkins. M.S., (July 2015)). It was a recurring theme when speaking to feed yards and abattoirs in the United States that liver abscesses in cattle were becoming more frequent. Temple Grandin also echoed the concerns and highlighted lameness and altitude disease are being seen more often in US feed yards. She stressed that optimal performance should be targeted instead of maximum performance. Genetics may not be the sole contributor of increases in these issues; however, the use of breeding values to allow for balanced selection will aid producers in combating such issues.

Changing Producer Attitude and Practices

Changing the current attitudes and practices of producers is a challenge as it must be presented in a practical, relevant and affordable form. Educating producers is the first step in improving best practice welfare in the red meat industry. In the 2016 MLA survey it was recommended that producer groups and veterinarians need to be targeted in order for MLA to have a greater influence. This would need to be delivered through field days and workshops made readily available over multiple locations. In 2016 only 48 per cent of cattle producers undertook formal learnings; however, 77 per cent could not identify an event that could be attributed to MLA, ((Howard. K, Beattie. L. (February 2018b)). Industry bodies have the ability to reach a wide audience and they will be key in improving best practice welfare implemented on farms.

The issue of time and economics are also an issue in adopting new practices and further support for producers implementing change would allow for an easier transition process. This support could be financial in helping to cover establishment costs of a new practice but could also be provided in assistance for long term planning and assistance in skill development. Again, readily available and affordable courses, workshops and field days will assist in developing skills of producers while grants could be used to provide financial assistance and incentives. Field days and workshops can also be used to demonstrate to producers how improved welfare practices can fit into the 'whole-farm system' to improve production and profits. The failure to clearly demonstrate benefits will likely result in failure of widespread adoption.

Conclusion

The use of best practice welfare is becoming increasingly important as the red meat industry is facing increasing pressure from consumers. The disparity between producers on the definition of welfare makes it challenging to implement best practice as some areas are not seen by all as a welfare concern. The costs associated with implementation also created a barrier to adoption. Challenges are also seen in producer education with many Australian producers unaware of the guidelines provided by MLA on

welfare in sheep and cattle. Placing further investment into the education of producers through workshops and field days has the potential to increase the awareness of benefits while also developing skill sets of producers. Promotion through producer groups and trusted sources (veterinarians) will assist industry bodies to influence a wider audience. The uptake of best-practice welfare will always be a challenge for the industry; however, continual promotion and development will aid the industry in seeing positive change.

References

American Society for the Prevention of Cruelty to Animals. (n.d.) Five Freedoms. Farm Animal Welfare Council. American Society for the Prevention of Cruelty to Animals. Accessed 13th February 2020. Website. https://www.aspcapro.org/sites/pro/files/aspca asv five freedoms final 0 0.pdf

American Veterinary Medical Association. (2010). Animal Welfare: What Is It? American Veterinary Medical Association. Accessed 22nd January 2020. https://www.avma.org/resources/animal-health-welfare-what-it

Commonwealth Scientific and Industrial Research Organisation. (n.d.) Food & Agriculture: Livestock Codes. Commonwealth Scientific and Industrial Research Organisation. Accessed 13th February 2020. Website. https://www.publish.csiro.au/FoodAndAgriculture/LivestockCodes

Dawkins. M.S., (July 2015). Animal welfare and efficient farming: is conflict inevitable? Animal Production Science 57(2) 201-208. CSIRO Publishing. Published June 2016. Accessed 2nd February 2020.

Duncan. I.J.H. (2005). Science-based assessment of Animal Welfare: Farm Animals. Department of Animal and Poultry Science. University of Guelph. 24 (2), pp. 483-492. Accessed 13th February 2020. https://pdfs.semanticscholar.org/6181/05cfc42ffdbc3476d841ef771bd469cc1e7c.pdf

Grandin. T, Deesing. M. (2008). Humane Livestock Handling: Understanding Livestock Behaviour and Building Facilities for Healthier Animals. Storey Publishing. HV4757.G73 2008. Accessed 14th February 2020

Howard. K, Beattie. L. (February 2018a). A national producer survey of sheep husbandry practices. Meat and Livestock Australia. E.AWW.1501. Accessed 21st May 2020.

https://www.mla.com.au/research-and-development/search-rd-reports/final-report-details/Anational-producer-survey-of-sheep-and-cattle-husbandry-practices/3709

Howard. K, Beattie. L. (February 2018b). A national producer survey of cattle husbandry practices. Meat and Livestock Australia. E.AWW.1501. Accessed 21st May 2020.

https://www.mla.com.au/research-and-development/search-rd-reports/final-report-details/Anational-producer-survey-of-sheep-and-cattle-husbandry-practices/3709

Merriam-Webster. (n.d.). Best Practice. Merriam-Webster dictionary. Accessed 1st February 2020. https://www.merriam-webster.com/dictionary/best%20practice

Napolitano. F, Knierim. U, Grass. F, De Rosa. G. (2009). Positive Indicators of cattle welfare and their applicability to on-farm protocols. Italian Journal of Animal Science. 8:Sup1. 355-365. Accessed 14th February 2020. https://www.tandfonline.com/doi/pdf/10.4081/ijas.2009.s1.355?needAccess=true

Spooner. J.M., Schuppli. C.A., & Fraser. D. (2012). Attitudes of Canadian beef producers towards animal welfare. Animal Welfare 21(2),273-283. Accessed 2nd February 2020.

 $\frac{https://animalstudiesrepository.org/cgi/viewcontent.cgi?referer=https://scholar.google.com/\&https://scholar.google.com/&https://scholar.go$

The Country. (September 2019). New rules for dehorning and disbudding cattle. The Country. Lifestyle. News Article. Accessed 13th February 2020. https://www.nzherald.co.nz/the-country/news/article.cfm?c id=16&objectid=12270925