## Selling the good news story about red meat: challenges and solutions by Priscella Evans

#### Introduction

The Australian red meat industry's deliberate focus on research and development across the 21<sup>st</sup> century has enabled unprecedented evolution and advancement. Australian beef, lamb and pork industries today uphold the highest level of on-farm welfare, by mediating extremes in climate, focusing on nutrition to optimise gut microbiota and enhance rumen papillae and avoiding any handling method that may increase stress on-farm, during lairage, or at sales and processing facilities (Elolimy et al. 2019; Hayes et al. 2017; Kline et al. 2019). These practices have been proven to enhance productivity. Scientific research has addressed the three major concerns of consumers, by reassuring them of the safe nutritional composition of red meat, demonstrating the benefits of an animal-welfare centred approach to management and justifying necessary environmental protection that safeguards future production (Ghvanidze et al. 2016; Holloway and Wu 2019). Despite this, the red meat industry continues to battle an undercurrent of consumer distrust. It is continuously fuelled by the transcending power of social media and fear-based journalism, rendering it in pressing need of a solution (Buddle and Bray 2019).

### Why Bad News Sells

The old newsroom adage of "if it bleeds, it leads" deems bad news stories more sellable. <u>Fear</u>-based news preys on the anxieties of the general public and holds them hostage. Capitalistic journalism motives force reporters to look at the spectacular, the stirring, and the controversial one in a million case as news stories that the general public perceive to represent an entire industry (Arango-Kure et al. 2014). No longer is journalism a race to break the story first or present an accurate, scientifically supported, factual argument. For the media industry, profit is equated with acquiring ratings to secure advertisers (Altheide 2019).

Every minute, 278 000 tweets are posted, 1.8 million people press 'like' on Facebook and 72 hours of video are uploaded to Youtube (Barau and Afrad 2017). Social media has become an open forum for unsubstantiated opinions to be voiced. Whilst it can be a far-reaching communication and education tool for consumers, it can often be sensationalised and unbalanced. As such, it has become the primary catalyst for spreading misinformation about the red meat industry.

The challenge arises when considering that the average farmer is unmatched and has less social influence and marketing power, compared to the technology-savvy consumer base of 2020 (Marshall et al. 2019). Without an industry movement or national marketing scheme, there is simply no platform or equality in the opportunities to advocate and reinforce positive on-farm practices that are mandated across Australia (Buddle and Bray 2019).

## **Consumer Disconnect:**

Most consumers are unaware of the necessary practices that create high-quality end-products. Sustainable red meat production depends upon industry transparency, a national traceability system, strict biosecurity policies, ethical on-farm management and laws that mandate ecosystem preservation (Venter 2019). In other words, it is within a farmer's best interests to maintain animal welfare, as it translates to increased productivity and profit.

Consumers do not connect with, nor seek out peer-reviewed scientific reports, rather they depend on media outlets and tend to accept the exaggerated, journalistic style of increasingly common exposes as law (Greenheck et al. 2018). There now exists a severe dissociation between farmers and consumers and it all stems from the one root-cause: bad news sells.

# The Good News Story:

The red meat industry demands a heavy increase in positive public perception. Consumers must be encouraged to re-evaluate where and how they seek out facts and figures and only a campaign pushed by the industry itself can achieve this. Products should be re-marketed and re-branded to include the specific strategies engaged by farmers that explain all aspects of positive animal welfare (Faucitano et al. 2017). These include all handling and management practices utilised on-farm, during lairage and at processing or sales facilities.

Beef, lamb and pork farmers are pasture producing, welfare-minded, sustainable custodians of the land and this is reinforced through scientifically supported research. Recent studies have identified the benefits of ethical stockmanship upon meat quality attributes by monitoring cortisol levels through behavioural studies (Grandin 2018). Shade cloths have been shown to help decrease respiration rate and maintain the thermoneutral zone of feedlot cattle, promoting higher daily weight gains (Lees et al. 2020). The red meat industry has also funded research into climate change solutions. Careful nutritional management of beef cattle has reduced carbon emissions, such that feedlot cattle could be considered more environmentally friendly than pasture fed animals due to their ability to sequester carbon emissions from a grain-based diet (Mayberry et al. 2019).

Industry transparency is also accessible in the form of regulatory frameworks, codes and auditing programs, such as Meat Standards Australia, Australian Animal Welfare Guidelines, the Australian Pork Industry Quality Assurance Program and AUS-MEAT (McGilchrist et al. 2019; Schroeder et al. 2017; Watson et al. 2008). These stipulate that farmers uphold the welfare and health of their livestock, as well as the sustainability of their properties.

## American market research

Profit in the agricultural industry is dependent on increasing product demand, improving public perception and maintaining national interest. An industry tour of the American red meat sector, conducted in January of 2020, has offered solutions and notable points of comparison from which Australia could benefit. The USA has demonstrated that long-term trust and national interest can be encouraged by displaying total industry transparency and engaging with consumers across all generations. A variety of social media-based marketing strategies, based off research, targeted at specific consumer demographics whilst conveying appraisals of meat quality and safety, assist in achieving this in the USA.

Market research conducted in the USA has identified the five predominant categories of meat consumers, noting trends that define them and summarising the best marketing strategies to connect with them directly (Figure 1). Midan Marketing found that the Protein Progressives group, or the trend

setting portion of society, accounted for 16 per cent of adult meat consumers and were the most information-engaged group (Figure 1; Midan 2019). However, they are the most likely to shift to plantbased alternatives and must therefore be more heavily marketed to, in order to remind them of the nutritional benefits of meat. The ketogenic diet is one such avenue that could justify the benefits of eating increased red meat, in combination with fewer carbohydrates, to support weight loss, decrease the risk of diabetes, reduce cancer risks and decrease heart disease, among other benefits (Cabrera-Mulero et al. 2019; Soeters 2019). This approach would also connect with the Wellness Divas group, that account for 12 per cent of consumers (Figure 1). As extreme claim seekers, the Wellness Divas group is shifting towards eliminating meat from their diets, and therefore require increased scientific claims to educate them and maintain their market share (Midan 2019).



#### New marketing strategies

The media is shaped by dominant frames of consumer thinking (Buddle and Bray 2019). It is imperative that Australian journalism overshadows any distrust in the red meat industry with positive marketing and stories that recapture audience. At the forefront of advertising are phrases such as "no antibiotics", "hormone-free" and "plant-based meat alternatives". Although a product may be additive free, the result of these labels is that the consumer's mind subconsciously diverts to the additive being present in the supply chain, which means that these descriptions instil doubt in consumers, negatively affecting sales (Pulker et al. 2018).

Instigating a media-based marketing campaign that focuses on the nutritional benefits of red meat, in addition to the clean production methods will contribute to a more positive eating experience for consumers. Split-testing is one such way to scientifically test the effectiveness of such a campaign in

Australia. "Grass fed beef", "organic" and "premium" are labels that sell a healthy, safe and highquality product. The USA is shifting towards targeting the mother of children through such advertising, which may have long-term ramifications for future generations who tend to follow the eating habits of their parents (Osera et al. 2016).

Movements like veganism do not distinguish between different industry sectors. Bad publicity tarnishes the entire industry and agriculture therefore needs a united marketing front that could be funded by and in turn benefit all sectors. An example observed during the USA industry tour was the collaboration between the dairy and beef industry. Most feedlots across the Texas panhandle were dairy or dairy cross animals. In Australia, the beef and dairy industries are more segregated, with dairy breeds considered less profitable for processing on account of their long growing periods and large body frames. Additionally, they are associated with welfare issues, such as the abundance of bobby calves. Increased collaboration efforts could enable industries to utilise waste products, build a new pool of genetics and assist in the red meat industry in achieving a sustainable "0 waste" profile (Ruttan 2019).

Comparatively, there is an opportunity for the USA to learn how to better market lamb and to educate consumers on correct cooking methods. The annual Australian Day campaigns promote lamb to every demographic across Australia, creating a nation of lamb lovers that feel compelled to consume it. Expanding marketing co-ops, creating campaigns and educating consumers in America could increase demand for lamb, and even if such demand was minimal, when experienced nation-wide it would ignite the industry (McKee 2019).

### Educating the next generation

The average age of an Australian farmer is 57 (ABS 2018). The 2012 review into agricultural education and training in NSW found that agriculture was taught in only one third of public secondary schools, primarily as an optional elective. A national survey, commissioned by Woolworths five years ago, found that one in four students didn't know butter comes from cow's milk. There is no compulsory chance for all Australian students to learn about the red meat industry in its wider context of careers, nutrition and lifestyle. Consequently, a generational knowledge gap has emerged, as Australia has effectively lost its youth within the industry, which will lead to increased pastoral company ownership and foreign investors controlling and influencing Australian agriculture in the future (Coffey et al. 2018). The Australian syllabus and curriculum do not provide an opportunity to address the disconnect between rural and urban Australians. Although the Youth Food Movement Australia, which is partnered with MLA, attempts to equip young Australians with information about how to cook and understand the origins of produce, a more widespread approach could better address MLA's objective of increasing demand for red meat.

The solution lies in developing educational experiences in Australia that mirror America's 4H agricultural programs and schools' competitions. These should be targeted at the next generation of innovation, with on-farm and in-school programs. Such a program would aim to close the knowledge gap, opens the minds of high school students to potential careers in the red meat industry and ultimately bridge the rural-urban disconnect. A pilot study would require a class of students to connect with a local, progressive and authentic beef, lamb or pork farm. It would mirror how other "Farm-to-School" programs, studied by Allen & Guthman in 2006, have tried to rejuvenate rural communities

by infusing teaching from local farmers into local education bodies. Modern programs could additionally benefit communities and the red meat industry by exposing students to the industry's prosperous career paths and giving them information about how to pursue them. Educational programs encapsulate the idea that sound knowledge from a young age will sustain long-term trust in the industry.

#### **Common opportunities for improvement**

Increased publication of the positive impacts that agriculture has on the environment is an opportunity that could benefit both Australia's and America's public perception of the agricultural industry. Partially due to the lack of rebuttal from the agricultural industry, the media is quick to blame farming, particularly of animal products, for all environmental issues, with carbon emissions, land degradation and water consumption being at the forefront of consumers' minds. Globally, 70 per cent of freshwater use is dedicated to agriculture (Ray et al. 2018). The unprecedent drought of 2017-2020 has increased pressure on the Murray Darling Basin, which supplies water to 40 per cent of all Australian farms, generating AU \$19 billion in agricultural commodities (Head et al. 2019; Williams and Grafton 2019). By focusing on the problems associated with this geo-political issue, negative attention is drawn to the red meat industry. Comparatively, forestry contributes to pesticides, gas, oil and sediment build-up in the Murray Darling basin. Mining and industrial construction also deposit heavy metals, acids and other nutrients into waterways (Bennett 2019). These bioaccumulate and cause long-term damage to entire food chains, such as decreasing the population of turtles in the Murray Darling, yet the images portrayed in the media do not draw attention to these industries (Van Dyke et al. 2019). There is no discouraging of consumers buying wooden products as furniture or purchasing petrol for vehicles. Rather, the media attests all damage to agriculture, implying that it is the responsibility of consumers to shop ethically to save the basin.

Journalism needs to relay more hopeful messages, such as how the Australian agricultural industry has the potential to solve all the nation's water challenges. Partial river diversion schemes, such as the New Bradfield Scheme, have gained traction in government, aiming to capture excess floodwater from Northern Queensland to provide drought relief in southern and western parts of the state (White et al. 2019). Diverted water would eventually reach the Warrego river, forming part of the Murray-Darling catchment, rather than being lost at sea. With the appropriate marketing and support from the agricultural industry, the New Bradfield scheme could set a precedent for achievable drought proofing solutions. Australia should look to the global precedent set by America when futurizing the scale of water storage and pumping infrastructure. The Colorado River aqueduct in California was built with an additional 389km of pipeline to distribute water, opening previously untenable land for food production (Sullivan et al. 2019).

Unlike what is presented in the media, livestock is comparatively water efficient. The rice, cotton, fruit, nut, sugar cane, nurseries, flowers, turf and vegetables all require more water than pasture or grazing crops, deeming livestock production one of the most sustainable agricultural industries that is suited to the arid Australian landscape. The red meat industry recycles most water that enters intensive systems (Newell and Ramaswami 2020).

The Australian agricultural industry is also extremely water conscious, as lean meat can contain up to 75 per cent water (Okuskhanova et al. 2017). New wastewater management techniques have emerged in America, that improve the quality of water returned to ecosystems. Steam vacuums, high pressure water treatment and electrocoagulation have removed phosphorus and carbon, and correct pH in beef feedlot wastewater (Butler et al. 2018; Dixon et al. 2019). The addition of neutralising electrodes would be relatively cost efficient and promote the red meat industry's environmentally conscious philosophy.

Additionally, the profitability and longevity of extensive and intensive industries depends upon sustainable land use practices. Extensive livestock farmers carefully manage soil health for optimal pasture growth (Poore et al. 2019). This translates to more efficient and regenerative farming. Should this widespread philosophy be used to market branded beef, lamb and pork products, it would translate to increased consumer interest.

Similarly, rotational grazing reduces erosion and cell grazing enables long rest periods, which minimises weeds, encourages insect proliferation and utilises all available forage (King et al. 2017). Most farmers aim to sustain their shelter belts and wildlife corridors, as they increase biodiversity, encourage deeper percolation and prevent erosion (McAllister et al. 2019). A significant marketing opportunity exists to incorporate eco-friendly phrases into branding to engage with climate and ecologically conscious consumers.

#### Conclusion

It is imperative that current consumer perceptions are challenged through the same platform that is being used to create conversations and spread misinformation regarding industry practices. Social media offers an opportunity for action, a strong tool for advocacy and a chance for education. By utilising a direct line of communication to a large and engaged audience, it is possible for the Australian red meat industry to create a positive online presence and rebuild trust, thereby increasing public confidence in red meat production.

#### **References:**

Allen, P., Guthman, J. (2006). From "old school" to "farm-to-school": Neoliberalization from the ground up. Agriculture and Human Values, 23 (4): 401-415.

Altheide, D. L. (2019). Capitalism, hacking, and digital media. In Neoliberalism in Multi-Disciplinary Perspective (pp. 203-227). Palgrave Macmillan, Cham.

Arango-Kure, M., Garz, M., Rott, A. (2014). Bad news sells: The demand for news magazines and the tone of their covers. Journal of Media Economics, 27 (4), 199-214.

ABS. (2018). Agricultural Commodities Survey, Canberra, Australia.

Barau, A. A., Afrad, S. I. (2017). An overview of social media use in agricultural extension service delivery. Journal of Agricultural Informatics, 8 (3): 50-61.

Bennett, E. (2019). Policy and politicians are failing our environment and our future. Chain Reaction, 1 (135): 25-26.

Buddle, E. A., Bray, H. J. (2019). How farm animal welfare issues are framed in the Australian media. Journal of Agricultural & Environmental Ethics, 32 (1): 357–376.

Butler, E., Deotte, R.E., Clewett, C.F., Mulamba, O., Spaar, N., Hung, Y. (2018). Treatment of beef cattle feedlot wastewater by electrocoagulation technology. Desalination and Water Treatment, 101 (1): 77-85.

Cabrera-Mulero, A., Tinahones, A., Bandera, B., Moreno-Indias, I., Macías-González, M., Tinahones, F. J. (2019). Keto microbiota: A powerful contributor to host disease recovery. Reviews in Endocrine and Metabolic Disorders, 20 (4), 415-425.

Coffey, J., Threadgold, S., Farrugia, D., Sherval, M., Hanley, J., Askew, M., Askland, H. (2018). 'If You Lose Your Youth, You Lose Your Heart and Your Future': Affective Figures of Youth in Community Tensions Surrounding a Proposed Coal Seam Gas Project. Sociologia Ruralis, 58 (3), 665-683.

Elolimy, A. A., Abdel-Hamied, E., Hu, L., McCann, J. C., Shike, D. W., Loor, J. J. (2019). Rapid Communication: Residual feed intake in beef cattle is associated with differences in protein turnover and nutrient transporters in ruminal epithelium, Journal of Animal Science 97 (5): 2181–2187.

Faucitano, L., Martelli, G., Nannoni, E., Widowski, T. (2017). Fundamentals of animal welfare in meat animals and consumer attitudes to animal welfare. In New Aspects of Meat Quality (pp. 537-568). Woodhead Publishing.

Ghvanidze, S., Velikova, N., Dodd, T. H., Oldewage-Theron, W. (2016). Consumers' environmental and ethical consciousness and the use of the related food products information: The role of perceived consumer effectiveness. Appetite, 107 (1): 311-322.

Grandin, T. (2018). Optimal Human Animal Interactions for Improving Cattle Handling. In The Welfare of Cattle (pp. 139-148). CRC Press.

Greenheck, J., Johnson, B., Graves, A., Oak, A. (2018). Giving meat meaning: Creating valuebased connections with consumers. Animal Frontiers 8 (3): 1-5.

Hayes, M. D., Brown-Brandl, T. M., Eigenberg, R. A., Kuehn, L. A., Thallman, R. M. (2017). Evaluating a new shade for feedlot cattle performance and heat stress. Transactions of the ASABE, 60 (4): 1301-1311.

Head, L., Klocker, N., Dun, O., Aguirre-Bielschowsky, I. (2019). Cultivating Engagements: Ethnic Minority Migrants, Agriculture, and Environment in the Murray-Darling Basin, Australia. Annals of the American Association of Geographers, 109 (6): 1903-1921.

Holloway, J. W., Wu, J. (2019). The Red Meat Consumer. In Red Meat Science and Production (pp. 1-17). Springer, Singapore.

King, A. E., Lauri, M. B., Peter, J. T. (2017). Community-based grazing marketing: Barriers and benefits related to the adoption of best management practices in grazing systems. Journal of Applied Communications, 1 (1): 44-56.

Kline, H. C., Edwards-Callaway, L. N., Grandin, T. (2019). Field observation: Pen stocking capacities for overnight lairage of finished steers and heifers at a commercial slaughter facility. Applied Animal Science, 35 (1): 130-133.

Lees, A. M., Lees, J. C., Sejian, V., Sullivan, M. L., Gaughan, J. B. (2020). Influence of shade on panting score and behavioural responses of Bos taurus and Bos indicus feedlot cattle to heat load. Animal Production Science, 60 (2): 305-315.

Marshall, A., Dezuanni, M., Burgess, J., Thomas, J., Wilson, C. K. (2019). Australian farmers' low levels of digital inclusion–findings from the Australian Digital Inclusion Index. Journal of Rural Studies, 3 (1): 1-9.

Mayberry, D., Bartlett, H., Moss, J., Davison, T., Herrero, M. (2019). Pathways to carbonneutrality for the Australian red meat sector. Agricultural Systems, 175 (1): 13-21.

McAllister, T. A., Stanford, K., Chaves, A. V., Evans, P. R., de Souza Figueiredo, E. E., Ribeiro, G. (2020). Nutrition, feeding and management of beef cattle in intensive and extensive production systems. In Animal Agriculture (pp. 75-98). Academic Press.

McGilchrist, P., Polkinghorne, R. J., Ball, A. J., Thompson, J. M. (2019). The Meat Standards Australia Index indicates beef carcass quality. Animal, 13 (8): 1750-1757.

McKee, G. (2019). Livestock Marketing Cooperative Benefits in the 21st Century. In Western Economics Forum, 17 (1): 34-41.

Newell, J. P., Ramaswami, A. (2020). Urban food–energy–water systems: past, current, and future research trajectories. Environmental Research Letters.

Okuskhanova, E., Rebezov, M., Yessimbekov, Z., Suychinov, A., Semenova, N., Rebezov, Y., Zinina, O. (2017). Study of Water Binding Capacity, pH, Chemical Composition and Microstructure of Livestock Meat and Poultry. Annual Research & Review in Biology, 10 (1): 1-7.

Osera, T., Tsutie, S., Kobayashi, M., Segawa, Y., Kajiwara, C., Hashimoto, H., Kurihara, N. (2016). The effect of mothers' and fathers' food preferences on children's preferences with their attitude. European Journal of Nutrition & Food Safety, 6 (3): 93-100.

Poore, M. H., Rogers, J. R., Franzluebbers, A. J. (2019). 38 Enhancing production efficiency on southern beef farms with an interactive extension approach using forage management. Journal of Animal Science, 97 (1): 70-78.

Pulker, C. E., Trapp, G. S., Scott, J. A., Pollard, C. M. (2018). Alignment of supermarket own brand foods' front-of-pack nutrition labelling with measures of nutritional quality: An Australian perspective. Nutrients, 10 (10): 1465.

Ray, C., McInnes, D., Sanderson, M. (2018). Virtual water: its implications on agriculture and trade. Water International 43 (6): 717-730.

Ruttan, V. W. (2019). Sustainable agriculture and the environment: Perspectives on growth and constraints. CRC Press.

Schroeder, C. M., Gebel, K., Ross, S., Doerscher, D. R., Lutz, T. L., Whisenant, S. J., Morris, C. A. (2017). The Agricultural Marketing Service Animal Handling and Welfare Red Meat Purchase Requirements: Design, Implementation, and Findings. Meat and Muscle Biology, 1 (2): 1-1.

Sullivan, A., White, D. D., Hanemann, M. (2019). Designing collaborative governance: Insights from the drought contingency planning process for the lower Colorado River basin. Environmental Science & Policy, 91 (1): 39-49.

Van Dyke, J. U., Spencer, R. J., Thompson, M. B., Chessman, B., Howard, K., Georges, A. (2019). Conservation implications of turtle declines in Australia's Murray River system. Scientific Reports, 9 (1): 1-12.

Venter, C. (2019). Traceability in the red meat industry. Stockfarm, 9(9), 13-15.

Watson, R., A. Gee, R. Polkinghorne, M. Porter. (2008). Consumer assessment of eating quality—Development of protocols for Meat Standards Australia (MSA) testing. Australian Journal of Experimental Agriculture 48 (1): 1360–1367.

White, P., McGregor, R., Gertz, J. (2019). 'New Bradfield': rerouting rivers to recapture a pioneering spirit. The Conversation, 27 (1): 1-8.

Williams, J., & Grafton, R. Q. (2019). Missing in action: Possible effects of water recovery on stream and river flows in the Murray–Darling Basin, Australia. Australasian Journal of Water Resources, 23 (2): 1-10.