Hormonal Growth Promotant (HGP) use in the cattle feedlot industry

KEY POINTS

- Hormonal Growth Promotants (HGPs) are supplements of naturally occurring hormones used by some grass and grain fed cattle producers to help cattle meet market weight at an earlier age.
- HGPs have been used in the Australian beef industry for over 30 years and have been approved by the World Health Organisation (WHO) and the Australian Pesticides and Veterinary Medicines Authority (APVMA) as safe for both consumers and cattle.
- The levels of hormones in beef from HGP treated cattle are significantly less than the natural level of hormones found in many other products consumed daily by consumers.
- HGPs provide a range of producer and societal benefits including production efficiency, operation costs, beef retail prices and the environment. They help farmers produce more beef from fewer animals and resources meaning less emissions, manure, water and land requirements. This is not only imperative for farmers to remain financially viable but also helps meet the food requirements of the worlds increasing population.

BACKGROUND

The Australian cattle feedlot industry has a hard earned reputation as a producer of high quality, safe, and disease-free beef. This reputation is critical for the ongoing integrity and financial viability of the industry and is a fundamental plank of the marketing message to consumers both in Australia and overseas. Importantly, this reputation has been obtained through the implementation of robust legislation and proactive industry initiatives and is a key competitive advantage over other countries in international markets. Australia would never jeopardize this hard won reputation by using products that are considered unsafe to cattle or humans.

What are HGPs and why does the beef industry use them?

- HGPs are products implanted in cattle that slowly release small amounts of hormones to increase the proportion of meat versus fat production. Its use improves cattle growth rates (by 15-30%), feed efficiency (by 5-15%) and carcase leanness (by 5-8%).
- There are considerable community, environmental and on farm benefits of using HGP's. Given improved growth rates and feed efficiency levels, HGP-treated cattle help Australian farmers produce more beef from fewer animals and resources thereby lowering costs of production and beef prices to the consumer. Fewer cattle also mean less greenhouse gas emissions, manure, water and land requirements. This has been proven through various scientific reports throughout the world. Notably, if HGPs were not used, the Australian cattle herd would need to increase by more than 2 million head to produce the same amount of beef!![1].
- The ability to be more efficient and productive is not only vital to ensure farmers can continue to be financially viable but also imperative if we are to double food production between now and 2050 to meet the demand of the worlds increasing population. HGPs are one of the tools that have allowed the average Australian farmer to now feed 600 people per year (as opposed 20 people in 1950).

Why are there concerns about HGPs?

- Some customers and markets are concerned that the consumption of meat from cattle treated with HGP's may have potential health risks to both humans and animals. Accordingly, they have requested that beef supplied to them be from cattle that are not treated with HGPs. The basis of these decisions are not always clear. For example, the EU implemented a ban on HGPs in 1988 based on a precautionary principle approach i.e. that in future HGPs may be found to have human health implications. However, the World Trade Organisation (WTO) found in 1997 that the ban was unjustified and not based on any scientific evidence. No subsequent evidence of negative human health implications from HGPs has since been found. China and Russia similarly ban HGP use in beef supplied to them but it is unknown as to the rationale for this decision. Coles implemented its 'no added hormones' campaign in 2011 on the basis that HGPs reduced beef marbling and hence reduced beef eating quality. Those who question such decisions believe that HGP bans have been implemented to reduce the

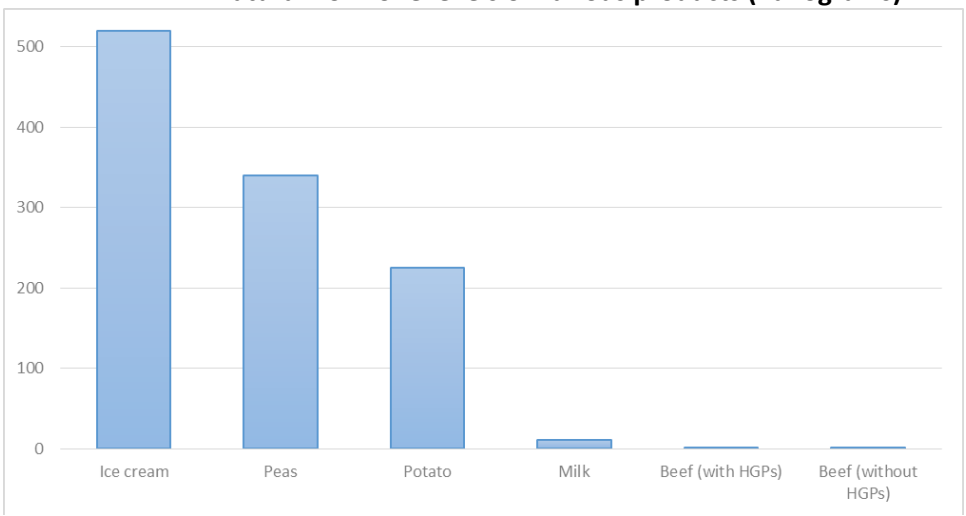
[1] Hunter R A. Hormonal Growth Promotant (HGP) use in the Australian Beef Industry (2009). B.NBP.0397. Report for Meat & Livestock Australia.

competitiveness of Australian beef imports against other country's less efficient domestic beef production or as a strategy to increase retail market share.

Are HGPs safe for humans and cattle?

- HGPs have been used by most major beef producing countries around the world (including the US) since the 1950's with no evidence of any impact upon human health during this time. The Australian grass and grain fed beef industry have utilised HGPs since 1979 with twice as many HGPs sold in the grass fed extensive beef sector than the grain fed beef feedlot sector. HGP's must go through a rigorous, extensive and scientifically based evaluation and assessment process by Australian regulatory authorities before they can be used by beef producers.
- Given that HGPs are designed to release hormones slowly and at low levels, the amount detected in beef is much less than many other foods consumed every day by the general public. For example a serving of beer contains 7 times the level of hormones as a serving of beef from HGP treated cattle, ice cream 270 times, peas 280 times and soybean oil 7466 times. Further, hormone levels in beef from HGP treated cattle are well below those naturally produced by humans. For instance, the average man or woman every day produces 480,000 times the level of hormones than a serving of beef from an HGP treated animal[2]! One birth control pill also has 35,000 times level of hormones than a serving of beef from an HGP treated animal. Hormones are essential for many bodily functions, including reproduction, growth, immune system response, as well as the functioning of the nervous and digestive systems.

Natural hormone levels of various products (nanograms)



- The Joint United Nations Food and Agriculture Organization/ World Health Organization Expert Committee on Food Additives concluded that the amount of hormones digested by humans through food consumption is low. The Committee also concluded that while hormone levels in HGP treated animals are generally higher than levels in untreated animals, they were within the normal range for hormones in cattle. Overall, the Committee determined that hormone levels in beef from cattle treated with HGPs are unlikely to pose a hazard to human health.
- Similarly, the Australian Commonwealth Department of Health and Aging undertook a review of HGP safety in 2003 and concluded that "*there is unlikely to be any appreciable health risk to consumers from eating meat from cattle treated with HGP's according to good veterinary practice*"[3]. It is also noteworthy that the use of HGPs does not impact upon cattle health or welfare.
- Despite the benefits of using HGPs, the Australian beef cattle feedlot industry is willing and able to meet customer demand for non HGP treated beef.

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[2] Growth Enhancement Technology website http://www.beeftechnologies.com/faqs/index.html
[3] A Review to Update Australia's Position on the Human Safety of Residues of Hormone Growth Promotants (HGP's) used in cattle (2003). Department of Health and Ageing, Canberra.