

UNDERSTANDING BEEF: HORMONES AND OTHER GROWTH PROMOTANTS

The use of hormones and other growth promotants for raising beef cattle has been the subject of public debate and confusion for many. Not surprising as we all care about the food we eat and want food that is raised with integrity, is safe and is best for our families at a reasonable price.

ABOUT HORMONES AND OTHER GROWTH PROMOTANTS

Hormones naturally occur in varying degrees in animals, people and plants. As such, they are present in many of the plant and animal-based foods that we eat, including beef. Our exposure to hormones from eating beef and other foods is minimal compared to what our bodies produce naturally.

Canadian beef farmers and ranchers may opt to use approved hormonal or other types of growth promoters as a regulated practice in raising cattle more sustainably. The use of growth promoters helps cattle convert the feed they eat into lean muscle more quickly and easily, reducing the amount of land, water and feed required, with less overall environmental impacts. Hormonal growth promoting supplements may also act to reduce aggressive

behaviour in cattle which could cause injuries to other cattle in the herd or their caretakers. Since cattle raised with growth promoters use their feed more efficiently, they put on weight more as muscle than fat, resulting in meat that is leaner.

Growth promoting substances, either natural-sourced or synthetic versions, are given to cattle as a slow-release pellet (implant) just under the skin or as part of the feed mix. (Note: see the *Glossary of Terms* for specific references).

SAFETY DISCUSSION

Agencies worldwide, including Health Canada, the World Health Organization and the Food and the Agriculture Organization of the United Nations, have conducted extensive scientific research to investigate the human health implications of using growth promoting substances in cattle. The studies have demonstrated these products are safe, used with proper



protocols and management and do not pose a threat to human health. The level of hormones in beef from cattle who have received growth promoters is virtually the same as the level in beef from cattle not given growth promoters. There is more variation in the hormone levels of male versus female beef cattle than between treated and untreated animals. All beef, including organic beef, naturally contains hormones – as do many other foods.



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OVERSIGHT AND REGULATION IN CANADA

As with all veterinary drugs used in our food supply, Health Canada mandated and reviewed the rigorous tests and studies prior to approving the use of hormonal and other specified growth promoters for raising cattle in Canada. The approval process is a legal requirement under Health Canada's Food and Drug Act. Manufacturing standards and protocols for use of these products are regulated by the government Veterinary Drugs Directorate. Only products with proven safety for people, cattle and the environment are approved for use.

Health Canada requires that animals given growth supplements follow strict withdrawal times before going to market. The Canadian Food Inspection Agency monitors and tests for residue levels in our beef. In Canada, the level of synthetic hormone residues that can be left in beef is zero. There are no established limits for the levels of natural occurring hormones in beef as levels are in the same range for both treated and untreated cattle.

Government monitoring of the practice has shown that hormone and other growth promoting products have been used by Canadian beef farmers and ranchers responsibly and safely since the 1960's. Beef may be raised with or without the use of growth promoting products. There is no such thing as hormone free beef so 'hormone-free beef' is not an appropriate claim. 'Certified organic' or 'raised without the use of hormones' are claims that can be used to describe beef that was raised without the use of growth promoting products.

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Canada Beef strives to present the facts around nutrition, culinary and farming practices based on the most current scientific research and tests at hand. As research on these topics is ever changing, we monitor and update these topics as necessary. Recognizing that a healthy discussion is the best way for us all to grow knowledge and understanding, we welcome your comments and conversation.

GLOSSARY OF TERMS:

Growth Promoter/Promotants:

substances that may be used to promote faster growth of cattle and leaner beef. They are approved for use in beef cattle. There are 2 classes of growth promoting substances: those used in cattle feed and those used as implants.

Hormonal Growth Promoters: naturally occurring or synthetic products. Estrogen (estradiol), progesterone, testosterone are natural growth promoting hormones present in beef cattle regardless of whether they are treated or not treated with growth promoter products. These hormones are also present in humans and may be used in human hormonal supplements/treatments. There are also synthetic versions of these hormones: zeranol (estrogen), MGA or melengestrol acetate (progesterone), trenbolone acetate (testosterone).

Implant: a pellet that goes under the skin for slow release administration that bypasses digestion. The active ingredient is most commonly the natural male or female steroid hormones (testosterone, estrogen or progesterone) or synthetic versions of the same, or a non-hormonal substance with similar effects.

Ionophores: non-hormonal growth promoting substance that may be added to cattle feed as a way to encourage growth. Ionophores are a type of antimicrobial (antibiotic) that reduces undesirable gut-bacteria in cattle that compete for feed nutrients in the cattle digestive tract. Ionophores can also reduce the amount of methane produced by cattle which is good for the environment. These types of antimicrobials are not used as an antibiotic to treat infections in people.

Beta Agonists: growth promoters that may be added to cattle feed to encourage lean growth in cattle. These substances do not function like hormones and do not have antimicrobial or antibiotic effects.



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The Centre demonstrates Canada's commitment to world class standards of quality and safety.

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