



## The Facts about Growth Promotants

**U.S. farmers and ranchers are dedicated to supplying the safety, highest quality and affordable source of protein in the world. That is meat, milk and eggs produced in the most efficient way while taking care to assure proper animal well-being and environmental sustainability.**

America's cattle producers use growth promotants to safely produce more of the lean beef that consumers demand while using fewer resources, like land and feed.

Sometimes referred to as cattle growth hormones, these production technologies have been used for nearly 60 years to help cattle efficiently convert their feed into more lean muscle. Most growth promotants are used to supplement existing hormones or compensate for missing hormones in an animal's body.

The hormones in growth promotants are metabolized or used by the animal's body before it goes to harvest. Although these products vary in active ingredients and dose, they generally work by discouraging protein depletion and encouraging protein synthesis in cattle so they can gain more lean muscle from less feed. Improvements in cattle production technologies including the use of growth promotants, have helped provide a growing population with the lean beef they demand while using fewer resources.

A University of Minnesota Extension Service study found that growth promotants improve cattle growth rates and feed conversion efficiency, increasing annual U.S. beef production by more than 700 million pounds while saving more than 6 billion pounds of feed. In addition, if the beef production practices from 1955 were used today, 165 million more acres of land – an area almost the size of Texas – still could not equal today's beef production according to an expert analysis. Growth promotant use in beef cattle typically improves lean tissue development by 8 to 20% compared to non-treated cattle and the use of recombinant bovine growth hormone in dairy cattle can improve milk production by as much as 10% in a cow.

Growth promotants typically are administered through a small pellet (called an implant) that is placed under the skin on the back of an animal's ear, but some can be administered through the animal's feed. The hormones in growth-promoting implants include estrogens (estradiol and zeranol), androgens (testosterone and trenbolone acetate or TBA) and progestins (progesterone and melengestrol acetate or MGA).

It is important to recognize that many common foods naturally contain estrogen (or phyto estrogen in plants) at levels hundreds or thousands of times higher than the levels in dairy or beef products that come from animals given estrogen hormones. In addition, estrogen levels in dairy and beef products from treated animals are essentially the same as products from untreated animals.

4 oz. beef from steer given hormones: 1.6 nanograms of estrogen  
4 oz. beef from untreated steer: 1.2 nanograms of estrogen  
4 oz. beef from non-pregnant heifer: 1.5 nanograms of estrogen  
4 oz. raw cabbage: 2700 ng estrogen  
4 oz. raw peas: 454 ng estrogen.  
3 oz. soy oil: 168,000 nanograms of estrogen  
3.5 oz. of soy protein concentrate: 102,000 nanograms of estrogen.  
3 oz. of milk from cow given rBST: 11 nanograms of estrogen  
3 oz. of milk from untreated (non-BST) cow: 11 nanograms of estrogen

Average level in a woman of childbearing age: 480,000 nanograms/day of estrogen

Average level in a pre-pubertal girl: 54,000 nanograms/day of estrogen

Average soy latte (one cup of soymilk): 30,000 nanograms of estrogen

The Food & Drug Administration requires extensive toxicological testing to determine safe levels of hormone use in livestock and requires manufacturers to demonstrate that the amount of hormone left in each edible tissue after treatment is well below that known to be safe – [www.fda.gov/cvm/hormones.htm](http://www.fda.gov/cvm/hormones.htm)

In addition to FDA, other prestigious bodies such as the WHO, UN Food and Agriculture Organization, Health Canada and international Codex Alimentarius Commission, agree that hormones can be safely used in agricultural animals.

#### **Affordability of U.S.-produced food**

The efficiency in today's agriculture means that American consumers spend only 10% of their income on food. This compares to elsewhere in the world where 18-25% of consumers' income goes toward the purchase of food.

#### **A family affair**

A common misbelieve is that large corporations control today's farms and ranchers, but the fact of the matter is that 99% of U.S. farms and ranches are still owned by individuals and family corporations or partnerships. According to the U.S. Department of Agriculture, there are only 7,000 non-family-controlled corporate farms in the United States. This compares with some 2 million plus family-owned operations.

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