

Feedstuffs FoodLink

The Facts About Growth Promotants

U.S. farmers and ranchers are dedicated to supplying the safest, highest quality and most affordable sources of protein in the world. That is meat, milk and eggs produced in the most efficient way while taking care to ensure 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 such as 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 (broken down) by the animal's body before it goes to slaughter. 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 cattle that haven't been treated. The use of recombinant bovine growth hormone in dairy cattle can increase 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 phytoestrogen 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.

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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 a steer given hormones contains 1.6 nanograms of estrogen
- 4 oz. beef from an untreated steer contains 1.2 nanograms of estrogen
- 4 oz. of beef from a heifer that isn't pregnant contains 1.5 nanograms of estrogen
- 4 oz. of raw cabbage contains 2,700 nanograms of estrogen
- 4 oz. of raw peas contains 454 nanograms of estrogen
- 3 oz. of soy oil contains 168,000 nanograms of estrogen
- 3.5 oz. of soy protein concentrate contains 102,000 nanograms of estrogen
- 3 oz. of milk from a cow given rBST contains 11 nanograms of estrogen
- 3 oz. of milk from an untreated (non-BST) cow contains 11 nanograms of estrogen

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

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

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

The U.S. Food and Drug Administration (FDA) requires extensive toxicological testing to determine safe levels of hormone use in livestock. The agency also requires manufacturers to demonstrate that the amount of hormone left in each edible tissue after treatment is well below that known to be

safe. Visit www.fda.gov/animalveterinary/safety-health/productsafetyinformation/ucm055436.htm for more information.

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

Affordability of U.S.-Produced Food

The efficiency of modern 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

One common misperception is that large corporations control the majority of American farms and ranches today, but the fact 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 more than 2 million family-owned operations.

For more facts on your food and the food production system, visit these websites:

- FeedStuffs FoodLink (feedstuffsfoodlink.com)
- Feed Stuffs (feedstuffs.com)
- Faces of Agriculture (facesofag.com)