The European Ban on Livestock Hormones and Implications for International Trade

Barry Krissoff
(202) 786-1668

Apprehension in the European Community (EC) relating to hormone-treated meat dates back to 1980 when Italian newspapers linked cases of premature sexual development and aging in infants with the consumption of baby foods that contained a veal extract with high concentrations of Diethylstilbestrol (DES). Although DES has been illegal in the United States since 1979 and in the EC since 1981, sensitivity to the use of hormones in meat production has spread to both sides of the Atlantic. European and American consumers are asking, "What's in the beef?"

More recent interest in anabolic agents—substances that affect both livestock and human metabolism—stems from the EC's April 1988 ban on the non-therapeutic use of hormones in the Community's domestic livestock industry. In January 1989, the ban was extended to countries that export meat products to the EC. The major exporting nations involved are the United States, Argentina, Australia, and New Zealand. Over the last few years, the United States has exported about $100 million of beef products annually to the EC, mostly edible beef offals (livers, kidneys, tongues, and hearts). Offals, or variety meats, are jointly produced with beef whenever cattle are slaughtered.

Anabolic agents include natural and synthetic hormones. They help cattle and sheep grow faster, with less feed, by stimulating the production of lean muscle tissue instead of fat. The hormones that are legal in the United States but banned by the EC include estradiol, testosterone, progesterone, melengestrol acetate, trenbolone acetate, and zeranol. *(See Livestock Hormones in the United States for a full discussion of the anabolic agents used in this country.)*

The use of anabolic agents in livestock has become widespread in the United States due to the structure of U.S. beef production. This country is a major producer of fed beef, which is meat from young cattle receiving a high-energy, grain-based ration, usually in a feedlot. The effectiveness of anabolic agents is associated with controlling feed rations. In contrast, Argentina, Australia, and New Zealand use hormones for only a small percentage of their cattle because of the nature of their livestock sectors. In those countries, cattle are mostly range fed. Therefore, hormone treatments are not as cost effective.

The EC Takes a Stand

European consumers responded to the 1980 reports of DES in baby food by organizing boycotts to stop the use of hormones. The European Economic Commission, the agency serving as the executive arm of the Community, reacted by banning the use of all anabolic agents in livestock production. This total ban was later modified to cover only DES, while excluding other anabolic agents authorized under existing national regulations.

The Commission appointed a committee of scientific experts—known as the Scientific Working Group or Lamming Group, after its chairman Dr. Lamming—to examine the use of anabolic agents. An interim report was issued in 1982, which concluded that naturally occurring anabolic agents (steroid hormones) were safe when properly administered. However, the Group recommended further

The European Community considers its ban on livestock hormones an internal production decision.

The author is an agricultural economist with the Developing Economies Branch, Agriculture and Trade Analysis Division.

study on the use of synthetically prepared hormones, like trenbolone acetate and zeranol. Before the Group could make a final report in 1984, the EC Commission disbanded it. The Commission, under pressure from consumers and the press, recommended a ban on all anabolic agents to the EC Parliament. In 1985, the ban was agreed to and initially set to begin January 1, 1988.

The Lamming Group published its own findings, stating that hormones are safe when properly administered. A panel of scientists from the Food and Agriculture Organization and the World Health Organization, two agencies of the United Nations, has also reached the conclusion that properly administered hormones in livestock pose no threat to human health.

Although current scientific evidence appears to vindicate the use of certain anabolic agents, the EC considers its ban on livestock hormones an internal production decision. The EC says its stance does not violate the Standards Code, the part of the General Agreement on Tariffs and Trade aimed at preventing governments from enacting policies on health, safety, and consumer protection that create unnecessary obstacles to trade.

As required by the Code, the EC is not discriminating against imports by treating them differently from domestic products. In addition, although the countries that signed the Code are urged to harmonize standards on an international basis, national regulations can differ from international ones when human health and safety concerns are involved. Thus, the EC has argued that its ban reflects consumer preferences for hormone-free meat whether domestically produced or imported, as well as consumer uncertainty about the validity of current scientific evidence and future health effects.

The U.S. Response

The initial U.S. response to the EC ban was that it could not meet the certification requirements because testing procedures are prohibitively expensive or the tests cannot distinguish between naturally occurring hormone residues and those from implanted hormones. The United States then went on to claim that the ban was an unfair trading practice since it is not based on scientific findings. Certifying that beef offals come from untreated animals is especially problematic, since the products originate from numerous animals and feedlots.

In January 1989, the U.S. Government imposed a 100-percent tariff on selected agricultural imports from the EC, whose value equals about the $100 million loss expected from the ban on U.S. meat exports, based on average 1985-87 sales. The tariffs were placed on boneless beef products, hams and pork shoulders (not cooked or boned, and not in airtight containers), instant coffees, wine coolers, preserved tomatoes, and fruit juices. The EC approved counter-retaliation measures, imposing tariffs on some U.S. products, but delayed any action.

In mid-February, the United States and the EC agreed to a 75-day cooling off period. Neither side would impose new tariffs. A joint task force—composed of nine officials from the U.S. Trade Representative's Office, USDA, and the European Commission—was formed to discuss the issues in an attempt to resolve the dispute. The objective of the task force is to establish a method by which the United States can export beef and beef products to the EC in a manner consistent with EC regulations and U.S. production methods.

In May, the United States and the EC extended the task force's discussions. Some progress has been made. Fed beef, which accounts for 15 percent of U.S. beef exports to the EC, will be allowed to enter the Community. EC inspectors, however, will monitor the imports to see if the regulations are being met. The tariffs imposed by the United States in response to the EC ban will be reduced accordingly. The task force continues to explore methods that will allow for export of U.S. beef offals.

Different Perspectives

Differences between the United States and the EC in beef production, consumer organizations, and regulatory systems have helped to create and intensify the dispute. In the United States, most beef comes from young feedlot cattle, whereas in the EC, beef mainly originates from dairy herds. Hormones were used in the EC to improve the grade of meat. In contrast, hormones were used to reduce costs in U.S. feedlots.

High-value, U.S. fed beef has a favorable reputation. The older grade beef produced by EC dairy cows treated with hormones was often perceived as tasteless. Consumer reaction has not been as vocal in this country as in the EC. Yet, some Americans are concerned and skeptical of the scientific evidence and regulatory enforcement. An advocacy group, Americans For Safe Food, publishes a guide to retail and mail order sources of untreated beef. U.S. sales of "hormone-free" beef are on the rise.

Another sticky issue arising from the U.S.-EC dispute is the problem of adequate inspection methods to prevent illegal hormone use. According to *The Economist* magazine, an estimated $1 million worth of illegal veterinary products, mostly hormones and related compounds, were sold in the EC during 1987. Farmers inject these illegally obtained hormones into the muscles of livestock, rather than through a capsule implanted in the ear. Thus, consumers may be directly ingesting the drug itself.

If there is widespread use of illegal drugs in the EC, then this clearly is counter to EC policy intentions and consumer interests. Rather than eliminating hormone use, the new regulations may have increased potential dangers to consumers. USDA's Food Safety and Inspection Service has requested that EC beef exporters comply with U.S. inspection standards to make sure their products are safe.

Future Considerations for Trade

The U.S.-EC dispute illustrates the complexity of resolving trade conflicts that involve food safety. The ban also shows how an internal problem can affect world markets.

Anabolic agents made with recombinant DNA—specifically, bovine and porcine Somatotropin—may be the next trade issue to appear on the horizon. Recombinant DNA has already been used to produce insulin, interferon, and human growth hormones. Unlike steroid hormones, which are associated with or mimic the sex glands, somatotropin directly regulates the growth of bone and muscle. In the United States, bovine and porcine Somatotropin are currently under review by the Food and Drug Administration. *(For more information on these compounds, see Regulating Food Safety: The Case of Animal Growth Hormones.)*

The use of somatotropin may affect domestic and world commodity markets, although considerable uncertainty exists in the role it may play in price and trade patterns. The effects may be small. One possible linkage is if U.S. farmers start using these new hormones, domestic production of pork and dairy products could increase. U.S. imports could be reduced, and exports could expand. The enhanced production could lower domestic prices and, because the United States is a big international livestock trader, world prices would probably go down as well.

Consumer reaction to pork produced with somatotropin would play an important part in any attempts to maket such products. The leaner meat could have positive health effects by helping consumers to lower their dietary intake of fats. Demand could rise and mitigate, or even reverse, the downward pressure on prices due to increased pork production.

If producers in other countries adopted somatotropin, there would be more downward pressure on world prices. Changes in trade volumes would depend on whether most of the dairy and livestock producers were from exporting or importing countries. If other exporting nations used the new technology along with the United States, they would be able to sell products more cheaply in world markets, and agricultural trade would expand. On the other hand, if only importing nations used the growth hormones, then their domestic production could provide more pork and milk at lower prices, driving out some foreign competition. Trade would decline. However, since it is unlikely that only exporting or importing countries will use the new hormones, what effect they will have on international markets is unclear.

Feed grain markets might also be affected indirectly by somatotropins since feed requirements would change. However, whether overall feed demand would increase or decrease is uncertain, depending on the new technology and the level of meat and dairy production.

Somatotropin adoption is unlikely in developing countries. These hormones are generally used on livestock that are fed controlled diets, because the animals need sufficient nutrition to support the increased metabolism and nutrient repartitioning. Unlike the United States, developing countries usually range feed animals and do not rely on concentrate feeds. The additional labor and management skills needed to use the hormones and monitor treated animals may also not be available in these countries, placing the developing world at a comparative disadvantage. □

References

Bredahl, Maury E. "Harmonizing Phytosanitary and Sanitary Regulations Through GATT Negotiations." Background paper prepared for The International Agricultural Trade Research Consortium Symposium on the GATT Negotiations, Annapolis, Maryland, August 1988.

"Brie and Hormones." *The Economist*, January 7, 1989, pp. 21-22.

Economic Impact of the European Economic Community's Ban on Anabolic Agents. Food Safety and Inspection Service, USDA, October 1987.

Ginzel, John and Barry Krissoff. *EC Ban on Growth Promotants: Economic Effects on Global Beef Trade*, Staff Report AGES89-2. ERS, USDA, in process.

Kelch, David R. "The U.S.-EC Hormone Dispute." *Agricultural Outlook*. ERS, USDA, March 1989, pp. 35-39.

Kuchler, Fred and John M. McClelland. *Issues Raised by New Agricultural Technologies: Livestock Growth Hormones*, AER-608. ERS, USDA, April 1989.