rBGH & rBST

Despite opposition from scientists, farmers and consumers, the United States currently allows dairy cows to be injected with recombinant bovine growth hormone (rBGH), also known as recombinant bovine somatotropin (rBST). Developed and manufactured by the Monsanto Corporation, this genetically engineered hormone forces cows to artificially increase milk production by 10 to 15 percent. Controversy surrounds whether or not rBGH is safe for cows and humans.

WHAT IS rBGH & rBST?

Somatotropin is a naturally-occurring protein hormone produced in the pituitary gland of animals; Bovine Somatotropin (BST or bST) triggers nutrients to increase growth in young cattle and lactation (milk production) in dairy cows. Artificial BST is produced using recombinant DNA technology (biotechnology), and called rBST for short. rBST is commonly known as Bovine Growth Hormone or rBGH. When injected into cows, rBGH increases milk production 10 to15 percent, and in some cases up to 40 percent. Approximately 17 percent of all cows in the United States are given the artificial growth hormone.

TODAY, THE EUROPEAN UNION, JAPAN, AUSTRALIA AND CANADA HAVE ALL BANNED THE USE OF rBGH DUE TO ANIMAL AND HUMAN HEALTH CONCERNS.

The U.S. Food and Drug Administration's (FDA) approval for rBGH came in 1993. According to opponents of the drug, effects of rBGH were never properly studied. The FDA relied solely on one study administered by Monsanto—an obvious conflict of interest—in which rBGH was tested for 90 days on 30 rats. The study was never published, and the FDA simply stated that the results showed no significant problems. Today, the European Union, Japan, Australia and Canada have all banned the use of rBGH due to animal and human health concerns.

ANIMAL AND HUMAN RISKS

A 1991 report by Rural Vermont revealed serious health problems with rBGH-injected cows, including an alarming rise in the number of deformed calves and dramatic increases in mastitis, a painful bacterial infection of the udder that causes inflammation, swelling, and pus and blood secretions into milk. To prevent and treat mastitis outbreaks, the dairy industry relies on antibiotics, contributing to the growing problem of antibiotic resistant bacteria. The FDA then relies on pasteurization to kill off bacteria, hormones and antibiotics in milk.

One lifelong New York dairy farmer lost a quarter of his herd to severe mastitis after beginning rBGH injections. The same farmer reported a drastic drop in production after taking his cows off rBGH; they suddenly produced less milk than they had before going on the drug. Other farmers using rBGH report similar problems, in addition to hoof diseases, open sores and bovine death stemming from internal bleeding.

Cows forced to produce unnaturally high quantities of milk can become malnourished because they lose more nutrients through their milk than they ingest in their feed. In addition to artificial hormones, factory farms also use selective breeding, feeding dairy cows large amounts of grain (instead of the grass their bodies are designed to digest), and exposing cows to longer periods of artificial light to make them produce more milk.

MONSANTO ON THE OFFENSE

While the FDA was lax in its reviews of rBGH, Monsanto aggressively tried to suppress the health risks involved in the use of its hormone. In 2001, two respected investigative journalists at a Fox News station in Tampa, Florida, were fired after months of controversy surrounding their investigative report on rBGH use in Florida dairies. In 2003, Monsanto asked the state of Maine to stop issuing an official Quality Seal, which the state only grants to dairies

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rBGH (cont'd)

that do not use rBGH. Maine refused. Later that year, Monsanto sued Oakhurst Dairy, Maine's largest dairy operation, over its rBGH-free labels. Ultimately, Oakhurst changed its labels, adding the statement, "FDA States: No significant difference in milk from cows treated with artificial growth hormone."

THE REGULATORY REVOLVING DOOR

Critics note and condemn a "revolving door" between the FDA and Monsanto. For example, Michael Taylor, the FDA commissioner responsible for writing the labeling guidelines, worked as a Monsanto lawyer for seven years before joining the FDA. While at Monsanto, he created their strategy for suppressing labeling information on rBGH. Likewise, the deputy director of the FDA's New Animal Drugs Office was a Monsanto research scientist working on rBGH safety studies. Another researcher in the same office had done Monsanto-funded rBGH research at Cornell University, working under a paid Monsanto consultant. Congress' General Accounting Office ruled in 1994 that none of these cases of longstanding connections to Monsanto posed a conflict of interest.

FIGHTING BACK

Despite Monsanto's efforts to promote rBGH, farmers, consumers and health advocates are rejecting the hormone. In 2007 United States grocery chains Kroger and Safeway banned the use of rBGH-treated milk in their store-branded dairy products. In January 2008 Starbucks stopped using rBGH-treated milk, and in March 2008 WalMart banned rBGH use in their store-brand milk products.

DID YOU KNOW?

- 54% of large herd farmers use rBGH.
- Monsanto lists over 20 toxic side effects on its POSILAC label that rBGH has on cows.
- In 2004, Monsanto announced a 50% cutback of Posilac® production due to repeated bacteria contamination in their plant in Austria.

What You Can Do...

- Use our rBGH-free online dairy map to find dairy products sold in your state that are artificial hormone free.
- Visit the Eat Well Guide for an online listing of stores, restaurants and producers that sell rBGH-free dairy products.

To find sustainably raised food near you visit www.eatwellguide.org.

Find more detailed information about rBGH on our website at **www.sustainabletable.org/issues/rBGH**.