Controversies Related to Milk Production and Consumption
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Udderly Divided:
Discussions of Controversies Related to Dairy Production and Consumption

Objective(s)
My main objective is to outline three major controversies that are at the core of dairy production and consumption. The three controversies I cover are the health benefits of milk, environmental hazards posed by milk production, and the use of hormones and anti-biotics in cows. In order to fully understand each controversy, I will present both sides of the argument, and analyze which side has the most reasonable argument based on the facts and reasoning they present.

Summary of Findings

Is Milk Really Nature’s Health Drink?

Over the last 50 years, schools, the government, parents and the media have reinforced the belief that milk is an essential component to our diet. The main reason for this push is the wide-array of health benefits in milk, which the proponents of milk consumption argue makes milk crucial for adults and children alike. The staunch support for milk’s health benefits is mainly due to the abundance of nutrients and vitamins that it contains. These include protein, vitamins A, D, and B12, calcium, potassium, phosphorus, riboflavin, niacin, zinc, and magnesium\(^1\). Proponents of dairy consumption cite medical studies that show how calcium is crucial for healthy bones in children and can help promote growth during critical developmental years. Furthermore the fat in milk has shown to improve brain development in children. For adults, the benefits of milk can also be substantial. Milk consumption is shown to stave off bone diseases like osteoporosis, and milk is also observed to reduce blood-pressure in adults, which in turn could reduces the risk of heart disease\(^2\). Recently, as touched on in Amber’s section, many

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\(^1\) Hannon, Kerry. US NEWS “5 Nutrition Facts About Milk and Healthy Kids”

\(^2\) Gennari, C. “Calcium and Vitamin D Nutrition and Bone Disease of the Elderly”
marketing firms are stressing that milk can help adults maintain a healthy body weight and should be a part of any weight-loss regiment. This stems from studies that show people who drink milk have a lower average body weight³.

Not only do corporations and farmers want consumers to drink more milk, but the government also stresses the importance of consuming more dairy products. The United States Department of Agriculture (USDA) recommends 3 daily servings of dairy and stresses that dairy is an essential component of any balanced diet⁴. There are national campaigns by the government and dairy groups that stress how importance of drinking milk every day. Nearly all the information presented by the government and milk lobbies points towards dairy as a healthy, wholesome and necessary component of any balanced diet. So that should make the choice between drinking and not drinking milk an easy one, right? Not necessarily.

A growing body of evidence is stating that the hazards of milk consumption really outweigh the benefits. While milk is full of calcium, vitamins and other necessary ingredients, it is also full of fat, particularly saturated fat. So much so, that studies are now suggesting that the high levels of saturated fat in milk could actually lead to heart disease. Furthermore, saturated fat in dairy is also linked to increased levels of colon, prostate, ovary and breast cancer⁵. Skeptics of milk also point to the large number of calories in milk, as one serving size of whole milk contains about 150 calories. This is equal to a can of soda. Opponents of milk consumption also argue that humans are the only species that drinks milk from another species, and continues to drink milk after nursing. They say it is unnatural, and there could be untold side effects that may come with the consumption of milk. Recent studies suggest that drinking milk while young could lead to an increased likelihood of contracting allergies. Opponents of dairy consumption believe stress that it is safer to take another route in order to get the calcium one needs, because there are too many risks associated with dairy.

There are many health benefits that can prove crucial in maintaining a healthy lifestyle. On the other side, there could be major dangers with milk, and the health benefits may be overstated. So when it comes to weighing the actual health benefits of milk, I agree with the proponents of milk, mainly due to the substantial evidence they have on their side. Milk clearly is laden with nutrients, and even though milk may be heavy in fat and calories, there are low-fat options that decrease the negatives these pose. However, I still think that opponents of milk consumption make many valid points. Drinking milk is unique to humans and the data from recent studies that show potential long-term risks to milk cannot be overlooked. But all this evidence against milk is still new, and it will take more research to convince me otherwise that milk is not actually healthy. With that in mind, I do believe that milk is likely not as nutritious as the government and big dairy interests want consumers to believe. So drink milk, it clearly has benefits and can be an important part of any diet. However I do not believe it to be the perfect nature’s drink that many of us have grown to believe it to be.

³ Perry, Andrea. UK Daily Mail, “Drink Milk to Lose Weight”

⁴ The Food Pyramid Guide, US Department of Agriculture

⁵ Nestle, Marion. What to Eat p. 78
Environmental Destruction Caused By Milk

If you asked 100 people to name a major contributor to global warming, most of the answers you would receive would likely have to do with emissions from automobiles and planes or pollution from factories. It is unlikely that emissions from cattle would be a very popular response. Even though people have little knowledge about the environmental hazards posed by cattle, the repercussions behind the hazards are potentially massive. It is difficult to find the environmental impacts caused by dairy cows specifically, but because a substantial percentage of cattle are used for dairy production, dairy is undeniably linked to the environmental damage caused by cattle.

The environmental impacts are especially large due to the greenhouse gasses released from cow flatulence. Greenhouse gasses are linked to global climate change and the degradation of the atmospheric ozone layer. Cattle are responsible for 18% of all greenhouse gas emissions. Compare that number to the 13% of greenhouse gasses that originate from automobiles, freight trucks, planes and ships combined. The Food and Agriculture Organization (FAO), which is a specialized agency of the United Nations, recently issued a warning about the massive environmental dangers posed by cattle, stating that:

“Emissions from land use are factored in, the livestock sector accounts for 9 percent of all carbon dioxide emissions derived from human-related activities, as well as 37 percent of methane emissions--primarily gas from the digestive system of cattle and other domesticated ruminants--and 65 percent of nitrous oxide gases, mostly from manure.”

The information by the FAO places cows at the forefront of greenhouse gas production, and explains how it is one of the leading causes of climate-changing pollutants that result from human activity. These pollutants may be the most dangerous, but they are not the only way that livestock is contributing to pollution around the world. The FAO also points to the extensive deforestation that as resulted from cattle grazing.

International bodies that advocate for environmental rights are warning about the large scale dangers that cattle production has, and assert that it will only get worse as meat and dairy demand is on pace to double in the next 50 years. While these groups are adamant about publicizing the environmental dangers of dairy production, dairy interest groups explain they are

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6 Brahic, Catherine. “Cows, Pigs and Sheep,” NewScientist

7 Neal, Kathy. “Global Impact of Livestock Production Focus of Recent Event
working to decrease the pollution from cows and warn against placing stricter regulations on dairy production because it could potentially cripple the industry. Dairy proponents point to the recent decrease in pollution per cow, which is a result of cows changing diets and new technologies that absorb methane from cow maneuver\(^9\). The dairy industry is strongly opposed to placing stricter regulations on dairy production as a means to decreasing pollutants. In the article "Dairies Can Coexist with Environment," an article published by the dairy conglomerate Land O’ Lakes, the dairy industry is adamant about not letting environmental regulations place a stranglehold on rural farmers with new regulations, as it could pose severe financial strains. Furthermore, dairy producers stress that nobody wants to preserve the environment more than farmers. The American Farm Bureau Federation explains that farmers “spend great amounts of time, money and other resources ensuring that their operations do not harm the environment,”\(^{10}\) but any fines or laws that penalize dairy production for possible pollutants would be economically crippling to small farms. Proponents of dairy production acknowledge that pollutants from cattle and dairy productions, while overstated by environmentalists, are real issues that need to be addressed. Yet they are hesitant to accept any regulations because of the potential economic impact on farmers and point towards improved industry and technological standards as the solution.

To me, this is an important issue. While the environmental impact is obviously massive, and the dairy industry plays a major role in many of the climate change issues we are facing today, the issue seems like a double-edged sword. Do we initiate policy that may curtail excessive pollution, but could also harm farmers, or do we do nothing, and let rampant pollution continue, while protecting farmers and hoping new technology can decrease pollution? Based of the information from both sides, I agree with adopting measures to curtail the number of cattle and reduce pollution. The dire warnings posed by the FAO about cattle pollution need to be heeded, and even if there are short-term economic repercussions to farmers, the long-term effects on the earth by doing nothing will be even worse.

**Hormones and Anti-Biotics: Scare Tactic or Real Issue?**

With growing demand for milk caused by the burgeoning population, farmers are willing to do anything to ensure the greatest utility out of their dairy cows. The use of hormones and antibiotics are common practices in conventional farming to maximize output, but is also a major point of debate that has drawn the most backlash by consumers and created an organic dairy market that is slowly gaining traction.

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\(^9\) “Do Large Dairy Farms Cause Significant Water Pollution” Procon.org

\(^{10}\) Do Large Dairy Farms Cause Significant Water Pollution” Procon.org
Antibiotics are generally used for three major reasons: to treat sick animals, prevent diseases in vulnerable animals, and to promote long-term growth in animals\textsuperscript{11}. For dairy cows, antibiotics are regularly used to treat udder infections that occur from the milking process. Hormones are similarly used, but are mainly utilized to increase the size of cows so they can produce more milk. Farmers and proponents of using hormones and antibiotics are adamant that these compounds are crucial for the viability of the dairy industry and are needed to ensure that dairy products remain affordable. Proponents point to the extreme price differential between conventional and organic milk (which does not use any hormones are antibiotics) as evidence of this\textsuperscript{12}. Furthermore, proponents of the use of hormones and anti-biotics in dairy production insist that the milk people consume does not have any traces anti-biotics in them, and if any cow is treated with antibiotics or any antibiotics are found in its milk, it is discarded and the milk from the cow is not used until it is safe again\textsuperscript{13}. Furthermore, proponents of using hormones state cows already produce hormones naturally, so it is safe to continue adding more synthesized ones.

Despite proponents of hormones and antibiotics insisting the contrary, there is a growing contingency that sees the use of hormones and antibiotics as a major threat to food safety and animal rights. Opponents of these practices cite studies that show cows treated with the most common hormone, rBGH are shown to have increased udder infections and reproductive problems\textsuperscript{14}. Opponents also assert that the increased use of antibiotics in our milk leads to humans being exposed to more antibiotics, which in turn could weaken our immune system\textsuperscript{15}.

While there is a movement brewing in the organic food industry to remove hormones and antibiotics from food, few policy changes are actually occurring in the United States. Unlike the European Union and Japan that have banned the use of these compounds in dairy production, the US has taken no action of such matter, and dairy interests have even fought against labels on food packages that state whether the milk comes from cows treated with hormones or antibiotics.

I think that both sides of the debate make important arguments about the risks and benefits of using hormones and antibiotics. While I believe there are health benefits to consuming organic dairy products that come from cows not treated with hormones or antibiotics, I do not believe the risks associated with conventional dairy production are very severe. Furthermore, the drastic price differential between organically farmed and conventionally farmed milk makes the incentive to drink organic milk even lower. Unlike the previous two controversies where I see which side of the controversy has a more convincing argument and

\textsuperscript{11} Centers for Disease Control and Prevention

\textsuperscript{12} Boer, Imke, “Environmental Impact Assessment of Conventional and Organic Milk Production”

\textsuperscript{13} Henricksi, D.M, “Effect of Growth and Serum Hormones in Cattle.”

\textsuperscript{14} Center for Food Safety, “rBGH/RBST”

\textsuperscript{15} Barton, MD. “Does the Use of Antibiotics in Animals Affect Human Health”
there are clear policy changes I would recommend, this one comes down to personal choice. If consuming organic dairy products provides you with a sense of comfort, then go for it. If the price of traditional dairy products is more important then its inputs, then that works as well. This controversy of dairy does not seem as serious as the others.

*Insight from Controversies*

After highlighting three major controversies that dominate the dairy industry, I realized how adamant each side is about protecting its interests and how the many strataums of each argument make one side difficult to pick over the other. The drastic economic and social implications of these controversies make them even harder to grasp. However, from the information I found, there was usually a side that had the more compelling argument. But often times, it fell on the wrong side of big business interests and government policy, making its goals unlikely to happen. So even if it had the better argument, it was likely to lose the controversy. Throughout this course, this is a major issue I have found with food politics. Even though one side has an argument that promotes better health and a stronger overall industry, the government or strong lobby groups largely control it. That makes positive and smart change hard to come by.
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