Genetically Modified Cows
The choice is yours…

Prepared by:
Danielle Hagner

Prepared for:
Dale Sullivan
English 320—Online Course

INTRO

The world is forever evolving and with this comes new ideas and discoveries. The idea of Genetic Modified Organisms(GMO's) with crops has been around for a while. But the science world has taken it one step farther to modified animals, specifically cows.

For a person who knows little about science this could sound like a scary thing. The ethical implications, safety of our families, and overall idea of brings heated battles to the discussion table.

There is no clear cut answer of what is right or wrong, but we will dig and find out the facts regarding the issue including background and scientific research. We will evaluate both sides of the debate and give an overall recommendation.

PRO

Over the next years genetically altered cows will have the ability to produce low-fat milk, help reduce global climate change, and improve medical issues.

The creation of modified cows happens by scientists adding extra genes for two proteins, beta- and kappa-casein. After creating transgenic cell lines with up to 39 additional copies of the casein genes, the scientists create cloned embryos by fusing the cells with cow eggs. With more casein in their bodies it means more cheese from the same volume of milk.

Opponents might suggest possible health concerns for keeping the modified milk out of supermarkets, but according to researchers in New Zealand, while the cows are

genetically engineered, the milk simply contains more of a naturally occurring protein.(better humans article) This process would be a great value to the dairy industry and to the struggling farming population.

Global Climate Change is a serious environmental issue that affects everyone. The health Scout News states that Methane is a major contributor (second only to carbon dioxide) to the greenhouse effect, which contributes to global climate change. Cows produce large amounts of methane due to their digestion process. With the process of genetically modifying cows, scientists think they can alter cattle digestion to reduce the amount of methane produced which would help our environment. They believe it can be achieved by removing microorganisms that produce methane in the cattle stomachs or by creating microorganisms that produce metabolic products other than methane. (Prevent Disease.com)

Genetically modifying Cows will not only help farmers and the environment, but will also help with existing medical concerns. According to the Trans Ova Genetics of Sioux Center, South Dakota that genetically modifying cows will produce a protein called albumin, which can be used to treat burn patients and help people with liver and kidney diseases (Keen).

CONS

By genetically modifying organisms to create “better” foods, we are jeopardizing our safety. Since manufacturers are not required to label how foods were genetically modified, consumers are unaware of what hazardous by-products they are consuming.

This puts the majority of consumers at risk, since most foods contain some sort of modified product to increase growth, flavor, etc.

The Western Journal of Medicine states in addition, the IGF-I in the milk of rBGH-treated cows is potentially more bioactive than the naturally occurring form, and this bioactivity may be increased further by pasteurization. Since the absorption of this product was tested only in adults, children may be more vulnerable to harmful side effects because their digestive tracts are not fully developed, they are continually growing, and they typically consume more milk than adults(Mercola).

Human genes have already been used in Britain to produce "designer meats". Salmon with extra mouse and human genes grow up to four times faster than normal. Human gene modification on cows, rabbits, pigs, and lamb is already being done to produce finer cuts of meat. If we genetically modify foods using human genes, will this turn us into a nation of cannibals?

Aside from using human genes to genetically modify foods, scientists are using other genes to modify plants. Scorpion poison genes have been given to cabbages so that if caterpillars eat the cabbage they will die. Can foods such as this be considered safe for human consumption? This is particularly alarming because, again, manufacturers are not required to label products telling consumers that their cabbage may contain scorpion poison (Coghlan).

If genetically modified animals should blend with the normal population of animals, there could be irreversible consequences. Should these animals reproduce, it could create mutant like animals that could taint our whole food supply.

Genetically modified foods need to be labeled appropriately so consumers know what they are eating, and parents know exactly what they are feeding their children. The long-term effects of growth hormones and other products given to cows to produce better milk and beef have not yet been fully determined and the side-effects of consuming these products should not be experimented with.

Evaluative summary of both alternatives

Genetic Modifying animals is a topic up to debate. South Dakota Agriculture secretary Larry Gabriel states “Right or wrong or somewhere in between, it appears genetic engineering will play and increasingly, larger role in the agriculture economy and perhaps in the survival of rural South Dakota.” There are positives and negatives but with enough research into the topic consumers can make an educated decision that fits their beliefs.

Recommendations

The development of new medicine and improvement of environment are strong reasons why scientists should keep improving the use of Genetically Modifying animals. Although the point of labeling any food that has been genetically altered should be looked into for the safety of consumers, the overall idea of altering animals for positive uses are a good idea. The recommendation for cautious consumers would be to research the company that altered the meat before purchasing it.

Sources

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