Essay on Genetic Engineering

Let us imagine a world full of ‘mini Hitters’ seeking world domination, killing millions as their solution to establish a superior race of headed humans eating a pig with 6 legs. These scenarios may sound like something out a science fiction novel, but this is the kind of things that people think about when they hear the words ‘genetic engineering’.

Genetic engineering is now an important part of this world. It is used to cure diseases, develop food that grows faster and food that’s healthier. Without genetic engineering, it will not be possible to feed the 10 billion humans expected by the year 2030. Only by using this new technology can we increase food production so that it is possible to feed this growing world. This can be done by producing plant varieties that are more precisely adapted to local conditions. This also helps poor farmers by reducing their expenses such as pesticides.

In developing worlds there are over 100 million children with vitamin A deficiency causing huge problems such as blindness. These people eat mainly rice and rice has no vitamin A. Right now the only way they can get enough vitamin A is by a costly supplement that doesn’t reach everyone. So scientists are genetically engineering rice so that it contains vitamin A, and this rice seed could be distributed to the poorest areas of the world.

Using modern biotechnology scientists have already produced food with improved flavor, food that is better for health and food with better qualities. Examples of these are apples and sweet corns that are insect resistant, frost resistant strawberries, and seedless grapes. One of the main reasons why people oppose genetic engineering is that they think biotechnology is an imprecise science and so it will

likely to result in unanticipated outcomes and dangerous surprises. But we know that people have been cross-breeding plants and animals for thousands of years. And every time they do this they are randomly recombining up to 40,000 genes. In using biotech scientists are just moving 1 or 2 specific genes, and the effects can be monitored and tested more easily.

So in comparison, genetic engineering is a lot safer than traditional cross-breeding. Another important aspect of genetic engineering is its medical purposes. For example, cystic fibrosis may be cured if a gene can somehow enter the cells of lungs, it will begin producing the critical proteins that CF patients lack. Scientists are working on this right now and some patients receiving this treatment have already been able to produce this protein in small quantities.

Genetic engineering and the knowledge about the effects of DNA variation among individuals can lead to revolutionary new ways to treat and even prevent thousands of disorders that affect us. DNA can also help us understand natural capabilities which can be applied towards solving challenges in health care, energy sources, agriculture, and environmental cleanup.