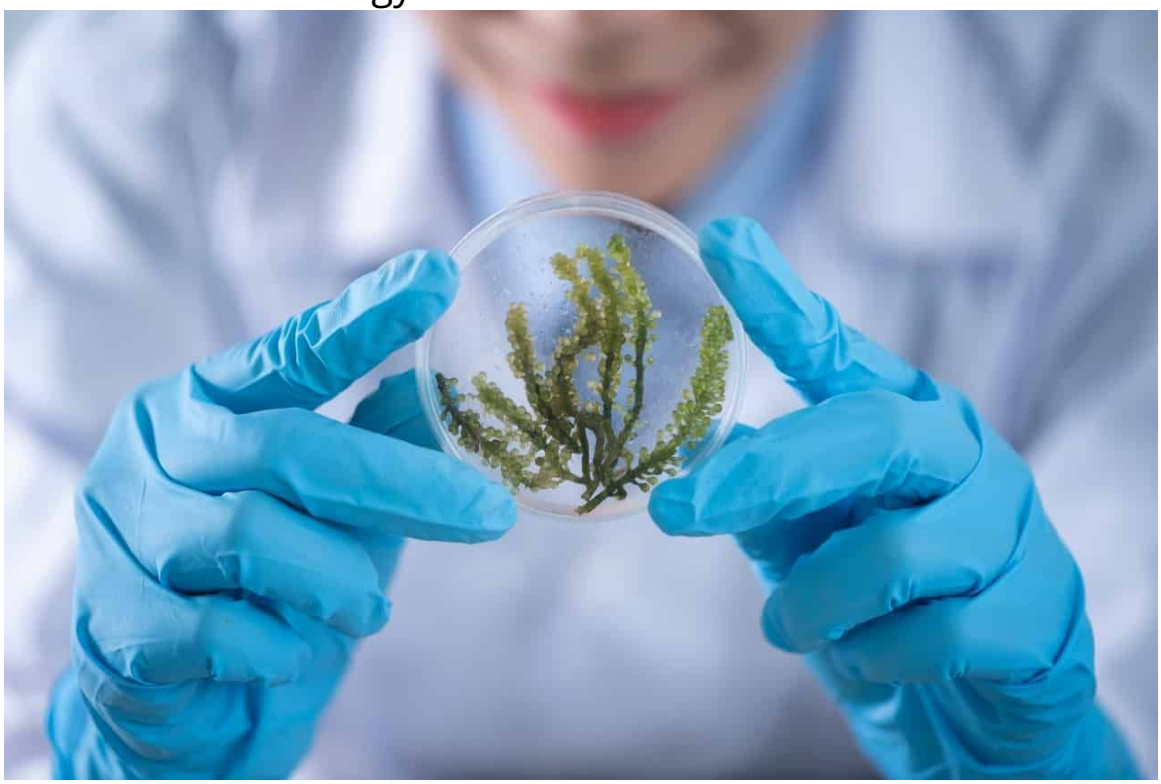
Pros and Cons of Biotechnology | 18 Best Points |

by Jordon Layne | Jun 10, 2021

The **Pros and Cons of Biotechnology** can range from altering genes in living things to medical applications. Biotechnology can be applied to animals and crops. There are several branches of biotechnology. You can have it involved in medical processes, marine processes, and agricultural processes. Technology ash improved over time to make the pros and cons of biotechnology come up. When biotechnology is applied in the right way, it brings about several benefits to humans. When it is mishandled, it can lead to several drawbacks. There are even some states that have restricted biotechnology applications in certain areas. Several plant species have been cross-pollinated to yield favorable yields. In animals, selective breeding and crossbreeding of animals have led to better yields. Some people advocate for biotechnology, while others are against it. There are several reasons they put forward. You need to go over the pros and cons of biotechnology to understand the field well.



The Pros of Biotechnology

1. Biotechnology improves medical treatments.

Some diseases arise from genetics. Through the study and applications of biotechnology, it is possible to understand the disease more. For example, the study of biotechnology makes it easy to understand how diseases such as cancer come up. When experts understand how the disease affects the genes, it is easy to develop the right therapies to target them. Several institutions across the globe deal with biotechnology. They play a significant role in making it easy for people from all walks of life to know how treatment procedures can be applied.

2. Contributes towards conserving resources.

Biotechnology contributes towards increasing the food supply. Food preservation methods, such as pasteurization and freezing, rely on the concepts of biotechnology. The study of biotechnology has made it possible for professionals to develop highly effective food conservation methods. When food is conserved and utilized economically, it is possible to conserve the resources required to generate food. Biotechnology has been applied widely, and it has worked perfectly to make food production companies contribute towards developing food conservation methods.

3. Biotechnology can help in managing waste.

Understanding biotechnology helps in managing waste. Some materials are biodegradable. Using such materials to package items makes it easy to manage dumpsites. It will be easy for them to rot and leave space for easy management of the dumpsites. Cities across the globe generate a lot of waste. The utilization of biotechnology can contribute to the reduction of waste. Waste can be a menace to the environment. Knowing the right steps you can follow to break down the waste is very necessary. It will contribute to conserving the environment greatly.

4. Biotechnology lowers the rate of infections.

Some infectious diseases can affect the population. The application of biotechnology plays a great role in dealing with the disease. The experts in the field will carry out research and know-how the disease is spread. After they know how the disease is spread, they will then develop effective strategies that they can apply to protect people who are vulnerable in society. Living organisms, such as bacteria, cause some diseases. Knowing how they behave and coming up with strategies to prevent their spread relies heavily on biotechnology.

You need to apply the technology, and it will contribute greatly towards helping you lower the rate of infection. Biotechnology companies are involved in the study of such diseases; they contribute greatly towards saving lives.

5. Nutritional Quality Improvement in crops.

When biotechnology is applied, it is possible to improve crop nutrition value. It is a great way to save on resources. People can eat a few foods from crops, and it will contribute a lot of nutrition. The arable land across the world keeps on shrinking as the population rises. The application of biotechnology can contribute towards conserving food by increasing the nutrition value in crops. It is also easy to

improve yields through the application of biotechnology. However, the usage of GMOs has been controversial in the past.

6. Biotechnology improves human health.

People need to eat nutritious foods. The application of biotechnology in the production of food contributes towards making people enjoy good health. People who eat food rich in minerals and vitamins tend to enjoy good health. Biotechnology's application plays a significant role in making people get enough vitamins and minerals from foods grown while adhering to biotechnology. Several diseases that affect humans have been tackled through the application of technology. It is a field that shows significant improvement in human life.

7. Flexibility within the food chain.

Some crops cannot grow in certain climates. The application of biotechnology makes it possible to grow crops in the desert. Some places are known to have a lot of pests that can affect certain crops. The application of the technology ash proved to work perfectly in helping people get pest-resistant varieties. Drought-resistant crops can be grown under minimal rain and still produce food. It is easy to diversity the food chain for the wellbeing of humanity through the application of technology. Several seed varieties have been developed through technology, and they have contributed greatly towards improving food production. The technology can be applied in marine life, plants on land, and even on animals. Gene altering and other processes involved in biotechnology lead to the production of plants and animals with highly resistant traits. The crops can be used in areas with poor rainfall to improve yields. It is a technology that contributes greatly to food security.

8. Medical advancement opportunities.

Through the study of biotechnology, it has been possible for experts to study diseases related to genetics. Experts can come up with the most effective ways of managing such diseases. For example, certain congenital disabilities are associated with a lack of enough folic acid in a mothers' body. The careful assessment of generics by experts makes it easy to develop the right methods that can be applied to manage the health condition. Technology has been advancing in the recent past, which has made it possible to develop ways of managing several health complications related to genetics. The technology ash made it possible for several treatments to be discovered. Scientists can develop the right strategies that they can apply to treat a wide range of diseases after they go further to study the diseases causing germs. Several advancements in technology have made it easy to treat several health complications that arise from genetic makeup.

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9. Biotechnology Improves crop yields.

The technology makes it possible for people worldwide to grow crops without relying on regular climatic patterns. Semitists are looking for ways to reverse engineer crops to be resistant to drought and other climatic conditions that limit their growth. The technology has proved to be highly effective in increasing crop yields. Farmers worldwide can rely on the latest technology to get better and more resistant seeds that they can sow to have high yields. People are constantly looking for ways to improve their crop yields to run profitable crop production practices. The application of technology has proved to be highly effective in helping people from all walks of life improve yields.

10. Biotechnology Minimizes Pesticide usage.

Biotechnology allows scientists to design crops that are resistant to certain pests and parasites. Growing crops that are resistant to certain parasites makes it easy to limit the use of pesticides. It is a significant saving to farmers. The use of too many pesticides can as well contribute to environmental pollution. The application of technology has proved to be highly effective. It allows people from all walks of life to save on growing certain crops that are known to be affected by pesticides. Farmers who would like to limit the use of pesticides can rely on the technology to get seeds that are easy to grow and expect good yields without spending a lot of pesticides.

11. Extending lifespan of foods.

Foods will go bad after some time. Scientists can apply the technology to make foods last longer on shelves. If food is not consumed within a given period, it can go to waste. The technology makes it possible for people to come up with food varies to assure farmers a long shelf life. Farmers are happy after they get food that can assure them a long shelf life. The food will last longer, making them get it to the market. The use of food preservation methods also relies on biotechnology. Experts have put forward several methods that can be applied to make it easy for food preservation. There is a lot of foods that go to waste across the globe. It is necessary to look for ways of conserving food. The application of biotechnology has proved to be highly effective. It can be a great way of utilizing food economically. Food can go into waste during transportation to markets or when in the market ready for consumption. The ability to extend the lifespans of food makes many people prefer technology. It leads to profits in food producers and sellers.

Cons of Biotechnology

1. Biotechnology can threaten the survival of certain species.

The whole process of biotechnology relies on the modification of genes or selective crossbreeding. The natural way of breeding is interfered with. The human-controlled process can develop complications that will then ruin the natural balance of species. It can easily lead to the extinction of certain species, which can have several adverse effects on the environment. There are several costs involved in the process. In case the process fails, it will lead to a lot of waste in the process. It is a process that should be monitored carefully to avoid cases where it can lead to many losses in the end in case of a bottleneck.

2. Biotechnology has many unknowns.

The change goes genres to treat certain diseases that can lead to unforeseen consequences. For example, some crops will not grow in certain climates. Changing the genes of certain crops to grow in any climatic condition can contribute to consensuses which the future generation will have to bear. Several consequences can arise in case the process can lead to complications in the future. Many people against the technology cite many unforeseen consequences that can arise if something wrong happens during the genetic modification process.

3. Increase in the spread of certain crop diseases.

Some crop diseases can be stopped through gene diversity. For example, the spread of blight in crops can be controlled through gene diversity. The application of biotechnology leads to large tracks of land under one crop that has been modified genetically to improve yields. In such cases, a disease such as blight in crops that can be minimized through gene diversity will spread fast. It will even require more resources to stop it, unlike growing crops naturally to resist the disease. It will be counterproductive if the process can

lead to the spread of the illnesses, yet it should contribute towards good yields.

4. Affects soil fertility.

Technology leads to the development of crops that are high in nutrients. The crops will have to get the nutrients from the soil. A high intake of nutrients leads to making the soil less fertile. It can take several years before the soil can recover if it is put under the crops for long. Theatre is the risk if the soil can lose its viability. People will have to try crop rotation, among other treatment processes, which will prove costly in the long run. It is necessary to consider the health of the cropland before venturing into a given crop farming. The future generation will have to depend on the land. It is necessary to take into consideration the well-being of the future generation before growing the crops. The practice can lead to a total loss of soil fertility if it is not checked well.

5. Risk of cross-pollination.

There is a risk that plants developed under biotechnology can be crossbred with other crops that have unfavorable conditions. They will lead to the development of plants with unique characteristics. There are even cases where the biotechnology companies have been sued due to introducing crops that were not sustainable due to the cross-pollination with the hybrids. There is a need to be careful about the crops in a given setup. The best way to go about the crops is to ensure you invest in safe crops. The process of biotechnology should be carefully monitored. For example, in gene-altering and cross-pollination, only favorable varieties should be crossbred. After introducing the new seeds, there are high chances to cross-pollinate with native species, which do not have good trains. The outcome may be different from the one intended at first.

6. Biotechnology turns human life into a commodity.

Some companies have turned to alter human crop DNA for profit-making. The patenting of certain gene sequences that can be applied in both humans and crops has brought about ethical issues. People argue the introduction of biotechnology has made it possible for people to control others' lives through the application of technology. For example, some processes can be applied to treat certain diseases, and they have been patented. It will require payment of fees before people can apply them to treat certain health complications. It brings about the ethical issues which make people argue is turning human life into commodities for the experiment.

7. Biotechnology can be applied for destruction.

Biotechnology's study of the organism and human life can lead to biological weapons for mass destruction. The engineers in the field can engineer certain species and make them harmful to humans for the sake of weaponization. The process should be checked to avoid cases where terrorists can apply it to create a harmful biological process that can destroy humanity. The process can be applied to different plants and animals. Its application in microorganisms can be

dangerous. There are high chances people with ill intentions can apply it to affect others. It is necessary to research widely about the consequences of certain processes before introducing them to the population. Even fear of accidents occurring can lead to severe consequences during the gene-altering processes. The threat of weaponizing the technology is real, and it has evoked fear in different jurisdictions where experts fear it can be applied to threaten human life.

Conclusion thoughts about the implications presented

There are several pros and cons of biotechnology. It is essential to weigh both the benefits and drawbacks before you can embark on a given technology. As far as technology

ash some drawbacks, it has several benefits, making many countries embrace it. For example, it can help in treating certain genetic-related diseases. In crops, it can be applied to come up with better yielding verities. The technology has been advancing over time, where it has contributed to excellent yields. It is essential to check on the pros and cons of biotechnology before you can take a stand. From the above list of pros and cons, you will be better positioned to make the right decision.

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