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## Definition

### ✓ What Is the Green Revolution?

Throughout history there have been many revolutions that have occurred and changed human lives, such as the American Revolution and the Industrial Revolution. In the mid- and late-20th century a revolution occurred that dramatically changed the field of agriculture, and this revolution was known as the Green Revolution.

The Green Revolution was a period when the productivity of global agriculture increased drastically as a result of new advances. During this time period, new chemical fertilizers and synthetic herbicides and pesticides were created. The chemical fertilizers made it possible to supply crops with extra nutrients and, therefore, increase yield. The newly developed synthetic herbicides and pesticides controlled weeds, deterred or kill insects, and prevented diseases, which also resulted in higher productivity.

In addition to the chemical advances utilized during this time period, high-yield crops were also developed and introduced. High-yield crops are crops that are specifically designed to produce more overall yield. A method known as multiple cropping was also implemented during the Green Revolution and lead to higher productivity. Multiple cropping is when a field is used to grow two or more crops throughout the year, so that the field constantly has something growing on it. These new farming techniques and advances in agricultural technology were utilized by farmers all over the world, and when combined, intensified the results of the Green Revolution.

This rapid increase in agricultural production is called Green revolution. The large increase in agricultural production due to mechanised agriculture, use of High yielding variety of seeds, use of chemical fertilizers and plant protection by spraying pesticides, etc. is called Green Revolution.

### ✓ History of Green Revolution.

The term "Green Revolution" was first used in 1968 by former US Agency for International Development (USAID) director William Gaud, who noted the spread of the new technologies: "These and other developments in the field of agriculture contain the makings of a new revolution. It is not a violent Red Revolution like that of the Soviets, nor is it a White

Revolution like that of the Shah of Iran. I call it the Green Revolution

The Green Revolution refers to a set of research and development of technology transfer initiatives occurring between the 1930s and the late 1960s (with prequels in the work of the agrarian geneticist Nazareno Strampelli in the 1920s and 1930s), that increased agricultural production worldwide, particularly in the developing world, beginning most markedly in the late 1960s.

### **Why was the Green Revolution needed?**

The Green Revolution, which was a period when the productivity of global agriculture increased drastically as a result of new advances, was a very important period in agricultural history. ... Although it had several benefits, the Green Revolution also had some negative effects on the environment and society.

### **Why did the green revolution happen?**

Green Revolution Intensive plan of the 1960s to increase crop yields in developing countries by introducing higher-yielding strains of plant and new fertilizers. The scheme began in Mexico in the 1940s, and was successfully introduced in parts of India, se Asia, the Middle East, and Latin America.

### **Who is the father of green revolution?**

Swaminathan is known as "Indian Father of Green Revolution" for his leadership and success in introducing and further developing high-yielding varieties of wheat in India. He is the founder and chairman of the MS Swaminathan Research Foundation.

### **The performance of Green Revolution**

1. As a result of the Green Revolution and the introduction of chemical fertilizers, synthetic herbicides and pesticides, high-yield crops, and the method of multiple cropping, the agricultural industry was able to produce much larger quantities of food.
2. This increase in productivity made it possible to feed the growing human population.

One person who is famous for his involvement in the Green Revolution is the scientist Norman Borlaug. In the 1940s, Norman Borlaug developed a strain of wheat that could resist diseases, was short, which reduced damage by wind, and could produce large seed heads and high yields. He introduced this variety of wheat in Mexico and within twenty years the production of wheat had tripled. This allowed for the production of more food for people in Mexico and also made it possible for Mexico to export their wheat and sell it in other countries. Norman Borlaug helped introduce this high-yield variety of wheat to other countries in need of increased food production, and he eventually won a Nobel Peace Prize for his work with developing high-yield crops and for helping prevent starvation in many developing countries.

3. In addition to producing larger quantities of food, the Green Revolution was also beneficial because it made it possible to grow more crops on roughly the same amount of land with a similar amount of effort. This reduced production costs and also resulted in cheaper prices for food in the market.
4. The ability to grow more food on the same amount of land was also beneficial to the environment because it meant that less forest or natural land needed to be converted to farmland to produce more food.
5. This is demonstrated by the fact that from 1961 to 2008, as the human population increased by 100% and the production of food rose by 150%, the amount of forests and natural land converted to farm only increased by 10%.
6. The natural land that is currently not needed for agricultural land is safe for the time being, and can be utilized by animals and plants for their natural habitat.
7. Green Revolution allows agricultural operations on a large scale.  
The Green Revolution has brought farming to a massive scale. Looking at the previous agricultural sector, crops that were grown in huge volumes are only those that required extensive human intervention to grow healthy, which means that it was not that easy. But now, we have made things easier, where most crops are being grown on an industrial scale even by the smaller farming community.
8. It has the potential to be able to grow any crop anywhere.  
This innovative farming process has made it possible for agriculture to be done almost everywhere. Though you still cannot grow potatoes on a beach, you will be able to utilize

most types of terrain or land to grow crops with it. This means that farmers do not have to be at the most fertile lands to be able to do their thing, as the Green Revolution has made it possible for agriculture to be more doable everywhere.

9. It eliminates the need to fallow lands. This agricultural method has allowed farmers to re-plant similar crops without fallowing their lands, which is known to be a costly process. Though there are some crops on which soil still needing to be fallowed, the Green Revolution has certainly made farming cost-efficient

### Issues with the Green Revolution

Although the Green Revolution had several benefits, there were also some issues associated with this period that affected both the environment and society.

1. The use of chemical fertilizers and synthetic herbicides and pesticides dramatically influenced the environment by increasing pollution and erosion.
2. The new materials added to the soil and plants polluted the soil and water systems around the fields.
3. The pollution of the water exposed people and the environment downstream to the chemicals being used in the farm fields.
4. The pollution of the soil resulted in lower soil quality, which increased the risk of erosion of the topsoil.
5. In addition to pollution, the environment was also influenced by the large irrigation systems that were required to sustain the growth of the plants.
6. The large amount of water required put pressure on the natural water reserves and resulted in water shortages and droughts
7. The environment was also negatively affected by the Green Revolution due to the consumption of more energy
8. From 1900 to 2000, the amount of energy put into agriculture worldwide increased 80 times due to the shift from human and animal labor to the use of large machines.
9. The increase in energy consumption and the dependency on more fossil fuels has resulted in pollution and has caused harm to the environment.