

Food Safety Issues in Modern Agriculture

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ARTICLE ID: 24

Introduction

With the unbroken growth of world population and rapid development on the economy, food safety has become a major concern. This quick growth of modern agriculture serves people with more food, but it also brings major food safety issues. Problems such as pesticide residues, genetically modified foods, soil and water pollution causes major health concern's [1]. To ensure food safety, it is important to know more about modern agriculture by conducting research on modern agriculture. This modern agriculture practices brings the concern of food safety, as the human population increases, demand for the food also increases it is important to make sure we consume safe food. With the urbanization the way food is produced and brought to the market has become challenging to produce safer food, one of the few challenges are pesticide. Using a lot of pesticides causes several health issues to the one who consume the food also to the one who spray the pesticide and there are more issues human notice in the daily life by consuming food from modern agriculture practices. This leads to a concern of human health and life safety. This article analyses and explore the problems in Food safety in modern agriculture.

Contaminants in Agricultural Products:

- **Pesticides:** By the name pesticides means chemicals. These chemicals are commonly used in modern farming to kill pest and insects. but can pose risks to human health if residues remain on produce. Some pesticides are toxic to the human and can cause risk of allergies, cancer and many respiratory problems. Also using the pesticides more than the limit is harmful for consumption of food

Few measures can be practiced.

1. Using the pesticides according to the local and national guidelines, that way the concentration of pesticides residue is reduced on produce
2. Including Organic matter, biological pesticides etc, can reduce use of pesticides and improves food quality and safety of agriculture products.



3. The main step in case of using pesticides is to conduct a regular pesticide residue test.
- **Antibiotics:** veterinary drug residue potentially leads to food safety issues, use of drugs like antibiotics, growth hormones etc, antibiotics remain in the animal can lead to antibiotic residues in meat and dairy products found mostly in eggs.
 - **Heavy Metals:** Rising Urbanization leads to environmental contamination. Heavy metals like, cadmium, mercury, zinc, iron, copper etc, released from industries are polluting soil and water. Even though heavy metals are needed by humans and plants they are toxic when concentration exceed prescribed level, they find their way into crops through soil or water pollution. Human exposed to heave metals through breathing or by drinking eating or people living around the industrial areas can face problems like Osteoporosis, reducing of thyroid hormones, renal dysfunction etc.
 - **Bacteria and Viruses:** Pathogens such as Salmonella, E. coli, and Norovirus can cause foodborne illnesses. Foodborne illnesses can happen at any point of the supply chain from farm to the table, mostly happen due to hygiene and cleanliness. Foodborne illness causes serious health consequences in human.
 - **Parasites:** Toxoplasma gondii is an example of a parasite that can contaminate food.

Impact of Modern Agriculture Methods:

- **Monoculture:** Growing a single crop over a large area can spread diseases and pests, affecting food safety.
- **Chemical Pesticides:** While they protect crops, excessive use can harm both consumers and the environment and they leave residue on the food we consume. Instead of using chemical pesticides adopting biofertilizers are the best alternative for safer food consumption and for better environment.

Measures to Improve Food Safety:

- **Increased Regulations:** Food safety regulations plays an important role in addressing modern agriculture food safety issues. Governments can enforce stricter regulations of food processing and agriculture production food safety inspections and penalties for violations.



- **Better Practices:** Farmers, processors, and handlers should adopt proper storage and handling techniques.
- **Education:** Training programs can enhance food safety knowledge.

Conclusion

In the urbanization world the major concern that needs to be taken care is food safety, the use of pesticides, antibiotic that are given to the animals and plants are the reason for foodborne illness. In order to ensure food safety a strong measure's need to be taken like strict supervision, promoting organic farming, educating consumers. educating consumer is equally important, they know what they are eating and pay more attention to the food safety. Modern farming needs to continue improving its food safety measures in order to make consumers life healthy and safety. Let's continue to prioritize safe and wholesome food for everyone!

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