

They are the generic name given to chemicals (fertilizers, pesticides, insecticides, etc.) use in agricultural to facilitate plant growth and protection. In short, they are agricultural chemicals.

Although initially used to improve crop production, overuse of chemicals has now started affecting the environment. Apart from the obvious effects on crops and the food chain, agrochemicals have a wide area of application. Due to these many uses, they seep into the surrounding land and water bodies, therefore having a widespread effect.

Agro-chemicals and their Effects


Agro- chemicals are the chemicals that are used in agriculture as pesticide, fertiliser, soil conditioners etc.

Types of Agro- chemicals:

Fertilisers:

These are the substances which are used to increase the nutrient amount in the land, it increases the rate of crop production.

The most commonly used compounds in fertiliser are phosphorus, nitrogen and potassium.



Fertilisers

Impact of Pesticides and Agrochemicals on environment

Regarding their impact on crops, excessive use of such chemicals generates a significant amount of residues. These residues cause nutrient imbalance and quality reduction of agricultural produce. The residues lead to long-term ill effects on the health of organisms that consume them. For example, pesticide residues in food have been linked to being one of the causes of asthma in humans.

Effect on Soil:

They may kill helpful bacteria

Increase nitrate content in soil

Alter pH levels

Kill soil organisms

Unnatural growth effects

Residual effects

Effect on Water:

Make water unfit for consumption

Agrochemicals in water diffusing with larger water bodies promote the growth of algae

Excess chemicals lead to Eutrophication

Lead to water pollution thereby affecting aquatic animals

Alter the chemical properties of water

Effect on Air:

Pesticide particles diffuse with air altering their nature

Wind drifts carry polluted air to other parts thereby spreading their ill effects

Depending on weather conditions, more amount of spray may evaporate

Air polluted in this way is inhaled by surrounding living organisms having drastic effects on their health

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