



Agrochemical

Its use and impact of environment and human health

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Introduction

Agrochemicals are chemicals used in agriculture, such as fertilizers, pesticides, and herbicides. These substances are used to improve crop yields and protect crops from pests and diseases. Some examples of agrochemicals include insecticides, fungicides, nematicides, herbicides, and fertilizers. Agrochemicals can be applied to crops in various forms, such as liquid sprays, powders,

or granules. They are used to increase crop productivity and protect crops from pests, diseases, and weeds. However, the use of agrochemicals can also have negative impacts on the environment and human health, so it is important to use them responsibly and consider alternatives when possible. There are two main ways that pesticides can be transmitted. The first is through the soil, where pesticides that

have been applied to plants end up after being washed away by rain. The second is through their long-term persistence as pollutants, with between 80 and 90% of applied pesticides able to evaporate into the air within a few days of application. The amount of water-soluble pesticides that enter bodies of water depends on

Use of Agrochemicals

Agrochemicals are used in agriculture to improve crop yields, protect crops from pests and diseases, and control weeds. Some specific examples of how agrochemicals are used include:

1. **Fertilizers:** Fertilizers are used to provide plants with the nutrients they need to grow and thrive. They can be applied to soil or applied directly to the leaves of plants.
2. **Pesticides:** Pesticides are used to control pests such as insects, mites, and rodents that can damage crops. There are many different types of pesticides, including insecticides, fungicides, and herbicides.
3. **Herbicides:** Herbicides are used to control weeds in fields and gardens. They can be

Negative Impact of use of Agrochemicals on Environment

The use of agrochemicals in agriculture can have negative impacts on the environment. Some specific examples of how agrochemicals can affect the environment include:

1. **Water pollution:** Agrochemicals can enter bodies of water through runoff and leaching, leading to water pollution. Pesticides and fertilizers can harm aquatic plants and animals and can also have negative impacts on human health if they enter the water supply.
2. **Soil contamination:** Agrochemicals can contaminate soil, which can lead to reduced soil quality and fertility. Pesticides can also harm soil microbes, which are important for maintaining soil health.
3. **Air pollution:** The use of agrochemicals can contribute to air pollution through the release of volatile organic compounds (VOCs) and other pollutants.

their solubility, and fat-soluble insecticides can be absorbed by animals through a process called bio amplification or biomagnification. Fertilizers can also contribute to pollution through runoff and leaching of applied nutrients. The use of agrochemicals can lead to air, water, and soil pollution.

applied to soil or sprayed directly onto plants.

4. **Nematicides:** Nematicides are used to control nematodes, which are small, worm-like pests that can damage crops. They are often applied to soil.

Agrochemicals are used in many different types of agriculture, including traditional farming, organic farming, and urban agriculture. They are an important tool for ensuring food security and increasing crop productivity, but their use should be carefully managed to minimize negative impacts on the environment and human health.

4. **Eutrophication:** The addition of excess nutrients to water bodies through the use of fertilizers can lead to eutrophication, which is the process of enriching water with nutrients. This can lead to changes in the ecosystem such as increased growth of algae and aquatic plants, loss of fish species, and overall decline in water quality.
5. **Greenhouse gas emissions:** The use of fertilizers in agriculture is a major contributor to greenhouse gas emissions, including nitrous oxide and methane.
6. **Threats to biodiversity:** The use of agrochemicals can harm both aquatic and terrestrial biodiversity. Pesticides can drift into aquatic environments and harm fish and other non-target species, while herbicides can kill aquatic plants and decrease oxygen levels. Pesticides and

herbicides can also harm bees, birds, and other animals.

Negative Impact of use of Agrochemicals on human health

The use of agrochemicals in agriculture can have negative impacts on human health. Some specific examples of how agrochemicals can affect human health include:

1. **Poisoning:** Accidental or intentional ingestion of agrochemicals can lead to poisoning, which can cause symptoms such as nausea, vomiting, dizziness, and in severe cases, death.
2. **Cancer:** Some agrochemicals have been linked to an increased risk of cancer in humans. For example, certain pesticides and herbicides have been classified as carcinogenic by the International Agency for Research on Cancer (IARC).
3. **Reproductive problems:** Some agrochemicals have been linked to

reproductive problems in humans, including reduced fertility, birth defects, and miscarriage.

4. **Neurological effects:** Some agrochemicals can have negative impacts on the nervous system, including effects on memory, coordination, and motor function.
5. **Respiratory problems:** Agrochemicals can cause respiratory problems in humans, including asthma and other respiratory allergies.

It is important to use agrochemicals responsibly and follow proper safety guidelines to minimize their potential negative impacts on human health.