



IMPACT OF CHEMICALS AND PESTICIDES ON HUMAN HEALTH AND ENVIRONMENT

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ABSTRACT

The term pesticides including insecticides, fungicides, herbicides and other plant growth regulators. The consequences of pesticides is one of the main drivers of the negative impact of modern industrial agriculture on the environment. Pesticides are toxic chemicals use to kill pest species can affect plants, animals and humans, other agrochemicals such as fertilizers, can also have negative effects on the environment and global stability.

KEYWORDS : Fertilizers, Pesticides, Chemicals, Human health.

Aim of the Study:

The main Aim of present study is too look out the effects of pesticides on health and environment.

INTRODUCTION

Pesticides constitute any substance or mixture for preventing, destroying or mitigating any pest. Chemicals have long been used to control pests and insects which attack on crops and harm them. Pesticides benefit the crops, however they also impose negative impact on the environment and soil.

Pesticides are toxic chemicals designed to be deliberately released into the environment. Although each Pesticide is meant Pest, a very to kill a certain very very large percentage of Pesticides reach a destination other target. Pesticides easily than their target. Pesticides easily contaminated the air, soil, water, plants and animals. The use pesticide has increased many folds over the past few decades. According to an estimate, about 5.2 billion pounds of pesticides are used used world wide per year. Their use is not only restricted to agricultural fields, but they are homes in the form also employed in of sprays, poisons and powders for controlling cockroaches, mosquitoes rats and other harmful bugs.

Due to this reason, pesticides are frequently found in our food in addition to their presence in the air.

Hazards Pesticides in India

Pesticides are known to be one of the extremely useful and beneficial agents for preventing losses of crops as well as diseases in humans. The effects of pesticides depend on exposure and toxicity. Pesticides are divided into deferent categories depending upon their target pesticides are more water soluble heat stable and polar which makes it very difficult to reduce their lethal nature. Pesticides are not only toxic to people related to agriculture, but they also cause toxicity in industries and public health work places.

Any substance intended for preventing destroying or controlling pest unwanted species of plants or animals, causing harm during production processing, storage transport or marketing of food, agricultural commodities that may be administered to animals for the control of insects or other pests in or on their bodies.

Pesticides are referred to by the type of pest the control. Pesticides are biodegradable pesticides and non biodegradable pesticides.

Biodegradable Pesticides

Biodegradable pesticides are those that can be broken down into harmless compound by microbes and other living organism with in less period of time.

Non Biodegradable Pesticides

The most long lived pesticides include aldrin, D.D.T., chlordane and endrin they take a long period of time to break down. These pesticides can survive in the soil for over 15 years or more.

Chemical pesticides

1. Organophosphates-

Organophosphates are a group of human made chemicals that poison insects and mammals organophosphates are the most widely used insecticides today. They are used in agriculture, the home, gardens and veterinary practice.

2. Organochlorine Insecticides-

Organochlorine pesticides are chlorinated hydrocarbons used extensively in agriculture and mosquito control representative compounds in this group includes DDT, methoxychlor, chlordane, toxaphen and benzene hexa chloride (BHC).

3. Sulphonylurea herbicides-

Sulphonylurea inhibit the plant enzyme, acetolactate syntheses resulting in impaired branch chain amino acid synthesis and are generally more potent herbicides, sulphonyl urea are a group of medicines used to treat type to diabetes also.

4. Biopesticides-

The biopesticides are a type of pesticides obtained from natural resources such as animals, plants, bacteria and certain minerals. Biopesticides is a biological organism that damages, kills or repels organisms seen as pests. For example canola oil and backing. Soda have pesticidal applications and are considered biopesticides.

Benefits of Pesticides-

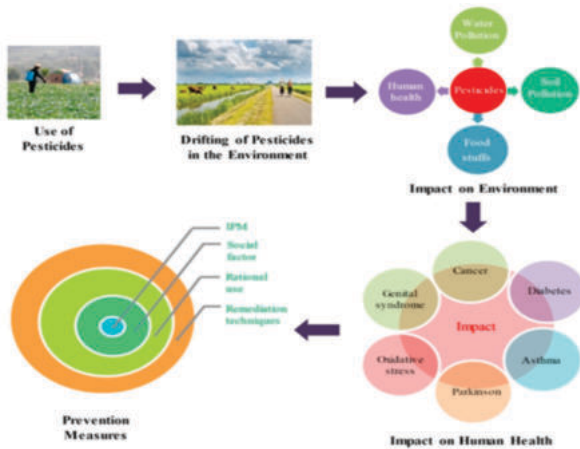
The advantage of pesticides is that they can help farmers preventing insects and other pests from destroying crops. The some other key advantages are:

- Pesticides are useful in controlling organisms that are toxic or harmful to their environment.
- Herbicides are useful in controlling algae and weeds
- They are used to kill mosquitoes that can spread life threatening diseases such as dangue, malaria etc.
- They are useful in the agricultural sector to prevent or kills insects and other organisms that feed on crops.

Pesticides Impact on Environment

Pesticides have contaminated almost every part of the environment. The amount of pesticides either directly or indirectly responsible for polluting our environment while being used in the field. Although their effects are short lived, they may begin causing hazardous environment and health

problems if they persist in the environment. When chemical pesticides are sprayed on the crops, they may spread to regions beyond the intended area.



Pesticides degrade the quality of soil and further the quality of food and yield chemical pesticides deplete the nutritional value of the food and contaminate it, while these chemical pesticides are developed to kill organisms found on the crop, these are also harmful to other living things.

The environmental effects of pesticides describe the broad series of consequences of using pesticides. The unintended consequences of pesticides is one of the main drivers of the negative impact of modern industrial agriculture on the environment. Pesticides because they are toxic chemicals meant to kill pest species, can affect such as plants, animals humans, pesticides can contribute to air pollution pesticides that are applied to crop can volatilize and may be blown by winds into nearby area, potentially posing a threat to wildlife. Pesticides also emits pollutants such as hazardous air pollutants and volatile organic compounds. These pollutants can contribute to health problems that may affect residents, the neighborhood and the community.

Pesticides Impact on Human Health

Pesticide exposure can be linked to cancer, endocrine disruption, reproductive effects, neurotoxicity, kidney and liver damage, birth defects in a wide range of species. The short term acute adverse effects pesticide exposure on human health are stinging eyes, rashes, blisters, skin irritation, blindness nausea and death. The worst pesticides include Atazine, hexachlorobenzene, Glyphosate, and methomyl.

CONCLUSION:

Pesticides have now become an essential part of agricultural production however many pesticides are not easily degradable they persist in soil, leach to ground water and surface water and contaminate wider environment. Some of the adverse effects associated with pesticide application have emerged in the form of increase in resistant pest population decline on beneficial organisms such as predators. Pollinators and earth worms, change in soil environment and contamination of aquatic systems, Depending on their chemical properties, pesticides can enter the organisms bioaccumulates in food chains and consequently influences human health.

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