

**IMPACT OF OVERUSE OF CHEMICAL  
FERTILIZER ON SOIL HEALTH**

**(A Review)**



**BY**

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FTC 05



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**SRI LANKA**

**2021**

## **ABSTRACT**

The Excessive use of Inorganic Fertilizers causes serious Environmental Degradation. Farmers were supplied with Chemical Fertilizers and Pesticides at a subsidized price in Sri Lanka and other Countries. Farmers increased the frequency of Fertilizer Applications to Enhance Yields. These Practices are still used and have caused Significant Environmental Degradation. In this Study, Review the Effects of Excessive use of Fertilizer and the Associated Environmental Risks.

The Dehydrogenase, Phosphatase Enzyme Activity and soil microbial biomass carbon (SMBC) Available N, P and K, Microbial Population of Soil after the Harvest of Improved significantly due to the integration of inorganic fertilizers with organic manures and bio inoculants. Positive impact of biological and organic manure application have been recorded with an additional advantage of reduction of chemical fertilizer use.

This review aims to advance our understanding of fertilizers how to involve the minimizing of soil and soil damages. Encourage interactions within the research community for broader application, and benefit society through innovation to realize sustainable agricultural practices.

It provides a holistic view of the role of nano biotechnology in multiple facets of agriculture, from the synthesis of nanoparticles to controlled and targeted delivery, uptake, translocation, recognition, interaction with plant cells, and the toxicity potential

of nanoparticle complexes when presented to plant cells. Nano biotechnology in agriculture is a driver for modern-day smart, efficient agricultural practices.

Nanoparticles have been shown to stimulate plant growth, reduce use fertilizers and disease resistance. The goal of sustainable farming and controlled the fertilizer application can be accomplished by developing and sustainably exploiting the fruits of Nano biotechnology to Nano fertilizers balance the advantages Nanotechnology Provides in tackling environmental challenges.

Research suggests that the massive use of fertilizers world-wide is associated with the accumulation of contaminants, e.g. Arsenic (As), Cadmium (Cd), Fluorine (F), Lead (Pb) And Mercury (Hg) In Agricultural Soils.

**Keywords: Excessive use of fertilizers; Environmental degradation; Fertilizer broadcasting; Rental land farming; Sustainable fertilizer management, Nano fertilizer; Smart delivery systems; Nanoparticle–plant interaction; In situ tracking**

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