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Chapter

Heavy Metal Contamination of Food Crops: Transportation via Food Chain, Human Consumption, Toxicity and Management Strategies

Vanisree C.R., Mahipal Singh Sankhla, Prashant Singh, Ekta B. Jadhav, Rohit Kumar Verma, Kumud Kant Awasthi, Garima Awasthi and Varad Nagar

Abstract

Food security is a major concern that requires sustained advancement both statistically and on the basis of Qualitative assessment. In recent years, antagonistic impacts of unforeseen toxins have impacted the quality of crops and have created a burden on human lives. Heavy metals (e.g., Hg, As, Pb, Cd, and Cr) can affect humans, adding to dreariness and in severe cases even death. It additionally investigates the conceivable geological routes of heavy metals in the surrounding subsystems. The top-to-the-bottom conversation is additionally offered on physiological/atomic movement systems engaged with the take-up of metallic foreign substances inside food crops. At long last, the board procedures are proposed to recapture maintainability in soil–food subsystems. This paper reflects the contamination of the food crops with heavy metals, the way of transport of heavy metal to food crops, degree of toxicity after consumption and the strategies to maintain the problem.

Keywords: assimilation, crops, health, heavy metals exposure, soil, toxicity

1. Introduction

The contamination of heavy metals has spread widely across the environment, wreaking havoc on humans and the environment causing risks to the human race and hazard for the environment. A few hazardous Heavy metals (such as As, Pb, Cd, and Hg) relates to metabolic and other organic capacities as inconsequential. Certain metals, like Zn, Fe, Cr (III), etc., are important to carry metabolic cycles, including hemeproteins (like cytochrome p450) and catalysts. They are related to biota metabolism [1]. Despite the fact that metals like Nickel is an essential part of urease,