

IDENTIFICATION OF IMPACTS AND HUMAN HEALTH RISKS PRODUCED BY THE PRESENCE OF PESTICIDES IN THE ENVIRONMENT

I. PESTICIDES BEHAVIOUR IN THE ENVIRONMENT

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Abstract. *The need to ensure the protection of plants and various areas affected by the presence of pests and pathogens imposed the use of chemicals to help in diminishing crop damages, namely pesticides. As Persistent Organic Pollutants (POPs), pesticides are resistant chemicals to bio(degradation), their residues being difficult to be removed from the environment. This papers discuss the state of investigations on the presence of pesticides in the environment, their behavior determined by their characteristics, types of pesticides used, the sources from which the pesticides can come. Also some threats that pesticides can generate in the environmental compartments (water, air, soil, sediments) are discussed in correlation with some specific properties of pesticides. A distinct section is dedicated to the presence and behaviours of pesticides in fruit and vegetables, the residues found in some plant products according to European Food Safety Authority (EFSA). This analysis generates the support for the identification and characterization of impacts and risks on human health generated by the consumption of plants containing pesticide residues.*

Keywords: absorption, air, bioaccumulation, long distance transport, persistence, soil, volatilization, water

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1. Introduction

In recent decades, along with the growth of the global population and its needs, there has been a considerable increase in the production of various synthetic substances and articles, the composition of which includes a series of chemical compounds, which, during manufacture and use, present a great danger to the health of people and the environment. The rapid development of the chemical and agro-chemical industry in the last century led to the discharge into the environment of a very large number of chemical compounds [1, 2]. Since the

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