



## **Report about the Situation of Highly Hazardous Pesticides (HHP) in Uruguay**

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### **Executive Summary**

Agrotoxic chemicals applied extensively in agricultural production and pesticides used in households and urban settings are substances developed to destroy organisms affecting animals, crops or materials, or that disrupt public health. Since these chemicals are often “non-selective,” and given that they can pollute air, water, food, and soil, they can also harm other living beings, including humans, pets or livestock.

Globally, more than 800 pesticide active ingredients are sold in tens of thousands of formulations. Our reality in Uruguay is similar to that of the world. The Directorate of the Livestock, Agriculture, and Fishing Department has registered 2,601 pesticides, including active substances and brands, varying between: insecticides, fungicides, rodenticides, nematicides, bird repellents, acaricides, molluscicides, co-formulants, formicides, physiological regulators, fumigants, and herbicides.

This report reviews the international context and the situation in Uruguay regarding Highly Hazardous Pesticides (HHPs) in accordance with the new criteria developed by the UN Food and Agriculture Organization (FAO), the World Health Organization (WHO), and the Pesticide Action Network International List of Highly Hazardous Pesticides.

According to FAO and WHO criteria, Highly Hazardous Pesticides are those chemicals that present particularly high levels of acute or chronic toxicity hazard for human health or the environment in accordance with internationally accepted classification systems, such as that of the WHO, or the Globally Harmonized System of Classification and Labelling of Chemicals, or are included within binding or relevant international agreements or conventions. The PAN International List of HHPs added other criteria, such as “fatal if inhaled,” endocrine disruption, high toxicity in bees, very toxic to aquatic organisms, and very persistent in water, soil or sediment.

The report found that 81 Highly Hazardous Pesticides included in the PAN International list of HHPs are approved in Uruguay, in 330 brands extensively used in vegetable gardens, agricultural crops, fruit farming, and forestry.

This report found that the European Union and many other countries have banned 43 pesticides that are registered and marketed in Uruguay, after we compare with the PAN International consolidated list of banned pesticides. This means that slightly over half of the existing HHPs are not sold or used in countries of different regions, including, for example, Paraquat dichloride, Mancozeb, Malathion, Iprodione, Glufosinate ammonium, Fipronil, and Chlorpyrifos, among many others.

According to the Global Harmonized System, 17 active ingredients have high acute toxicity and are fatal if inhaled. Additionally, some of them are listed under the WHO categories 1a and 1b: Beta-cyfluthrin, Carbofuran, Dichlorvos, Emamectin benzoate, Ethoprophos, Methiocarb and Methyl Parathion.

The US Environmental Protection Agency (EPA) classified 22 HHPs that are approved in Uruguay as probably carcinogenic to humans. This includes Iprodione, Diuron, Pholpet, and Thiacloprid, among others. Furthermore, the International Agency for Research on Cancer (IARC), an intergovernmental agency forming part of the WHO, classifies the following active principles as probably carcinogenic to humans: Diazinon, Glyphosate, Isoprazam, and Malathion.

Highly Hazardous Pesticides can cause different types of impacts, all of which are of great concern. Acute toxic effects or serious symptoms of toxicity appearing a few hours after exposure to HHPs, if they enter the body through the skin or eyes or if they are inhaled or ingested, might even cause death. Chronic effects, which develop gradually, generally occur as a result of repeated long-term exposure, over months or even years, in small doses. HHPs can also be carcinogenic to humans.

The report presents the public policy framework for chemicals management, including pesticides, and analyzes the international conditions under which the term Highly Hazardous Pesticides emerged. It is a relatively new category that appeared within the context of the Strategic Approach to International Chemicals Management (SAICM), and the FAO International Code of Conduct on Pesticide Management, both of which are voluntary initiatives.

After analyzing the international context, the report presents the general features of the national pesticide market, the business organizations it is comprised of, the authorities with the power to regulate and supervise, as well as the regulatory framework and procedure authorizing registration and marketing.

Furthermore, it includes information regarding the extensive use of these chemicals and the impact they have on human health, as a consequence of occupational exposure and accidental or deliberate intoxication, which may even lead to death.

Environmental pollution is also presented as a highly significant impact due to the fact that these chemicals persist in water, soil or sediments, causing death to fish, crustaceans, or algae in rivers, lakes, and the sea, many of which can bioaccumulate and concentrate in aquatic bodies over time.

Given that a vast majority of these Highly Hazardous Pesticides are insecticides, they are fatal for bees and other pollinators important not only for honey production, but also to fertilize many fruit trees and other crops. Among the 81 HHPs approved in Uruguay, 32 are highly toxic to bees. This is a very significant figure for a country like Uruguay, in which honey exports are an important economic item.

HHPs imply specific risks for children, workers, and the population in general. Exposure to HHPs may take place through ingesting pesticide residues in food and perhaps drinking water.

This report sets forth the following recommendations:

1. To eliminate the use of WHO Category 1a and 1b pesticides as there is enough evidence of their toxicity nationally and globally.
2. All pesticides considered Highly Hazardous -not just some of them- must be sold by prescription.
3. Taxes must be applied to Category II, III, and IV pesticides. The resources thereby generated will be allocated to improve surveillance of compliance with the laws currently in force, implement the national plan for the collection of empty containers, and promote less toxic alternatives, prioritizing organic agriculture.
4. All pesticide labelling must list Restricted-Entry Interval. Furthermore, pesticide waiting periods must be revised. These two proposals are aimed at improving protection of the health of people who apply for purchase and use of these chemicals.
5. The National Directorate of the Environment must measure pesticide levels in waterways that are a key source of drinking water and that are coursing through agricultural lands where there is extensive use of pesticides, or that discharge into waterways from which water is extracted for purification.
6. To monitor the presence of pesticide residues on food that normally receives intensive application of pesticides, particularly Highly Hazardous Pesticides.
7. To promote and support national research on alternatives, such as organic and agroecological production as a form of increasing the cultivation of pesticide-free food. This way, Uruguay will benefit not only from producing and marketing high-quality food, but also from protecting natural resources, such as soil and water, as well as what is most treasured, its people.

We would like to emphasize that Uruguay, being a small country, would be able to base its food production on agroecological systems using alternatives to reduce “pest” populations, such as resorting to biological control through insects, fungi, beneficial bacteria and viruses, as well as plant extracts; conducting agricultural practices that diversify agroecosystems, such as crop association and rotation, trap crops, and pest-repellent crops; as well as not only disseminating but also supporting the alternative experiences of producer organizations and agricultural research institutions with an agroecology-based approach to ecological pest management, soil biological fertility, and crop management.

Fortunately, in Uruguay there are currently producers who grow foods in a different way. They know that cultivating the land need not be equal to attacking it. They are aware that it is possible to control pests without using agROTOXIC chemicals and that by cultivating the soil, it can be improved rather than become degraded. Not only do they dispense with

monocrops, agrotoxics, chemical fertilizers, and genetically modified foods (GMOs), but it is also a way of relating with others and to nature.

The main goal is to produce in such a way that ensures the comprehensive wellbeing of all producers, consumers, and the environment, and allows the producer to profit economically in terms of long-term sustainability.

Agroecological production is not only possible and necessary, but is actually being implemented to different degrees in productive land throughout Uruguay. Conjoining farmers' traditional knowledge with elements pertaining to modern science, opens up a dialogue between different forms of wisdom and/or knowledge that constitutes a series of guiding ecological and agricultural principles.