



Endocrine Disruptor Pesticides: Could these be Responsible for the Increasing Prevalence of Some Endocrine Diseases in Cameroon? A Review

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Description

Pesticides have a variety of uses as they are used in crop protection, at home and in public health for vector control. Although useful, the general public is becoming increasingly concerned about the possible impact on the health of humans and the environment. Some of these pesticides have been identified as endocrine disruptor chemicals (EDC) that interfere with human and animal hormone systems and are capable of altering hormone balance and embryo development with the risk of adverse effects on the health of organisms and their offspring. Our reviews reveal that EDC exposure show that the general population is in fact exposed to a mixture of EDCs. A majority of the studies show that there is an association between exposure to endocrine disruptor chemicals and the disorders affecting the endocrine system. Exposure of humans to pesticides could either be due to their occupations or through dietary or the environment via water, air and soil. Our discussion of some endocrine diseases emphasizes the need to focus on the high prevalence of cancer as an endocrine disease and stress on further research to explore the cause of the increasing prevalence of cancer in Cameroon.

A pesticide is a chemical used for killing pests which are living organisms that interfere with the growth, development and yield of a crop. There are many different types of pesticides to kill different types of pests. The common ones being herbicides, fungicides, insecticides and rodenticides, which kill weeds, fungi, insects (may also control ticks, mites, etc) and rodents respectively. The toxicity of pesticides varies, so some are very hazardous to use while others are less hazardous. Safety is one of the most important considerations when working with pesticides which include safety to the user, to other people, to domestic animals and to the environment generally. They are three possible routes by which a pesticide can enter the body; through the skin (dermal absorption), through the mouth (oral ingestion) and through breathing (inhalation - lungs). Unfortunately,

the poor use of pesticides and spray application of crops has led to rural workers, their family and the environment exposed to the chemicals being used for crop protection, with the risk of affecting their health. The safe and efficient use of agrochemical and bio-products is important to minimise the risks.

Pesticides use in agriculture

With reference to the Population Reference Bureau, the world population is expected to increase from its current level to around 8.5 billion in the year 2035. About 80% of this population will be living in the developing world where arable land per person is shrinking from 0.38 ha per person by 2050. The ability of the world's farmers to produce food has increased greatly in recent years, which has indicated to the Food and Agriculture of the United Nations that by 2030, the estimated global food production in developing countries will be 70% higher than in 1995/1997. With land pressure already high on productive cropping areas, these increases will have to come from improved crop varieties (including genetically modified strains), improved production practices, more attention to soil fertility and water management, and reduced crop losses to serious pests (including diseases and weeds), which can otherwise cause losses estimated at 50% of harvestable produce

Pesticides have become regarded by many farmers as the principal tool for combating these pests in agriculture. Although organic production is increasing, it currently only represents a small proportion of world food production and with lower yields per hectare is likely to remain a niche market. Integrated pest management (IPM) production systems are expected to become more widely adopted to reduce external inputs, even though pesticides can be used more judiciously with IPM. In the year 2018, the global market for pesticides was estimated to reach a value of USD 90 billion by the year 2023

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