

Pesticides & insecticides Imminent threat to health and the environment

Pesticides are considered the most important environmental pollutants impact on all living components including ecological balance. All scientific studies have pointed to the poisoning danger caused by pesticide and its impact on the environmental pollution as pesticides considered like any other strange chemical compounds that can affect the pathways in the environmental media. The effects can be summarized as follows:

Food Contamination: Human exposure to pesticide residues leads to chronic toxicity and the incidence of serious disease risk such as delayed neurotoxicity and chronic paralysis.

Water pollution: chemical pesticides are considered one of the pollutants of water. Organochlorine Group is one of the most dangerous pesticides contaminating water due to long-term effect; they also have a broad impact on a large number of creatures, including humans. One of the most dangerous pesticides of this group is "D. D. T", "Aldrin" and "endrin"; it reaches sea via water leaking from agricultural land or from the air.

Soil contamination: pesticides in the soil affects fertility and ultimately leading to pollution and damage to human beings and animals through eating contaminated plants.

Impact on living organisms: Pesticides that can cause serious damage in some fish, birds and wildlife species, such as: change behavior, and the lack of reproduction. The pesticides also affect the honey bees and other pollinating insects, eventually leading to lower vaccination rate in flowers, in addition to the weakness of the power of bee colonies, and then decline in honey production.



EPDA Vision:

Protection of the environment and the sustainability of its resources .

EPDA Message:

Excellence in providing, monitoring and environmental awareness services and promote the concept of environmental citizenship, through the application of environmental laws and regulations and investment in relationship with our partners and conduct studies and research that contribute to the protection of our natural resources.

Organic Agriculture... Dealing with nature not against (Organic Agriculture not against to the nature)

The organic production methods started to develop in many countries in the world at the beginning of the twenties, a new agricultural concept named BIODYNAMIC has appeared in 1924 in France. The early pioneers in the organic agriculture have called it with many names such as environmental agriculture, bio agriculture, organic agriculture, biodynamic agriculture and bio intensive agriculture all these names are synonyms that refer to one consensus name which is organic agriculture, that aims to produce food free of pesticides and sufficient to feed the human beings with more sustainable methods without harming the environment. The problem of multiple names has become less severe after the formation of the International Federation of Organic Agriculture Movements IFOAM.

The spread of organic agriculture have increased rapidly at the global level. The estimated annual increase to organic agriculture instead of chemicals-based agriculture is about 20%. IFOAM started in 1972, with five organizations, whereas after fifteen years it included 100 organizations from 25 countries, nowadays the number of organizations that joined the Federation is more than 800 organizations from more than 100 countries.

Organic agriculture definition:

There are many explanations and definitions for organic agriculture but all converge to state that it is a system that relies on ecosystem management rather than external agricultural inputs. Organic Agricultural – is an environmental method with economical and social dimensions, designed to produce safe and clean food in ways that would take into account the natural balance, and without affecting the ecosystem. This includes agricultural systems to produce food and etc.,with environmental, social and economical content.

These systems take the fertility of the soil as the basic source of production through respecting the nature of the plant, the animal and the environment, which requires radical changes in the farming system. Organic agriculture relies on an agricultural cycle system, and the re-use of organic materials from within the farm, such as crop residues, animal manure, legumes and green manure, as well as organic waste from outside the farm. It also depends on non-chemical methods to control the pests (insects, diseases and weeds). Fertilizers, chemical pesticides,

growth regulators and chemical additives (in the animal's food) are excluded from organic agriculture. The soil structure and fertility is the base for the crop production in organic agriculture. To achieve a live and a fertile soil a policy of appropriate natural fertilizer should be used.



Agricultural pests

Agricultural pests are one of the main problems that drain time, effort and money from the farmers, pest problems has been exacerbated in recent decades, and despite all the efforts being made in order to deal with this issue, it remains one of the most important problems. Chemical pesticides are considered the most important means in regular/ intensive agriculture, and sometimes the only means available to farmers to reduce pest damage. But in organic farming, crop decline due to pest attacks would be less severe, since the environmental balance arises in the farm, as a result of biodiversity that is created by diversifying crops, and stopping using chemicals, which provides the opportunity for insects to benefit. That leads to the development and the construction of a fertile soil. All these factors make the spread of pests fewer. The most important element in the animal production in organic agriculture is to respect the physiological and behavioral needs of animals. This can be achieved through supplying good quality of organic food with sufficient quantity and providing a suitable living space, through the management of animal production according to the needs, and providing veterinary service for animals. The harmonious relationship between plant production and animal production is a very important factor to achieve the ecological balance within the farm. This is achieved by providing sufficient animal manure needed to fertilize the soil and increase soil fertility, as well as providing organic food for animals from the same farm. The source of fertilizer can be from another animal farm, but should be managed in an organic way as well.

The environmental benefits of organic agriculture

- Sustainability over the long term: Organic agriculture considers the medium- and long-term effect of agricultural interventions on the agro-ecosystem. It takes a proactive approach as opposed to treating problems after they emerge.
- Soil. Soil building practices such as crop rotation, inter-cropping, symbiotic associations, cover crops, organic fertilizers and minimum tillage are central to organic practices. These encourage soil fauna and flora, improving soil formation and structure and creating more stable systems. In turn, nutrient and energy cycling is increased and the retentive abilities of the soil for nutrients and water are enhanced, compensating for the non-use of mineral fertilizers. Such management techniques also play an important role in soil erosion control. The length of time that the soil is exposed to erosive forces is decreased, soil biodiversity is increased, and nutrient losses are reduced, helping to maintain and enhance soil productivity. Crop export of nutrients is usually compensated by farm-derived renewable resources but it is sometimes necessary to supplement organic soils with potassium, phosphate, calcium, magnesium and trace elements from external sources.
- Water. In many agriculture areas, pollution of groundwater courses with synthetic fertilizers and pesticides is a major problem. As the use of these is prohibited in organic agriculture, they are replaced by organic fertilizers (e.g. compost, animal manure, green manure) and through the use of greater biodiversity (in terms of species cultivated and permanent vegetation), enhancing soil structure and water infiltration. Well managed organic systems with better nutrient retentive abilities, greatly reduce the risk of groundwater pollution. In some areas where pollution is a real problem, conversion to organic agriculture is highly encouraged as a restorative measure.
- Air and climate change. Organic agriculture reduces non-renewable energy use by decreasing agrochemical needs (these require high quantities of fossil fuel to be produced). Organic agriculture contributes to mitigating the greenhouse effect and global warming through its ability to sequester carbon in the soil. Many management practices used by organic agriculture (e.g. minimum tillage, returning crop residues to the soil, the use of cover crops and rotations, and the greater integration of nitrogen-fixing legumes), increase the return of carbon to the soil, raising productivity and favoring carbon storage.
- Biodiversity. Organic farmers are both custodians and users of biodiversity at all levels. At the gene level, traditional and adapted seeds and breeds are preferred for their greater resistance to diseases and their resilience to climatic stress. At the species level, diverse combinations of plants and animals optimize nutrient and energy cycling for agricultural production. At the ecosystem level, the maintenance of natural areas within and around organic fields and absence of chemical inputs create suitable habitats for wildlife. The frequent use of under-utilized species (often as rotation crops to build soil fertility) reduces erosion of agro-biodiversity, creating a healthier gene pool - the basis for future adaptation.
- Ecological services. The outcome of organic agriculture on natural resources favors interactions within the agro-ecosystem that is vital for both agricultural production and nature conservation. Ecological services derived include soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, predation, pollination and habitats. By opting for organic products, the consumer through his/her purchasing power promotes a less polluting agricultural system. The hidden costs of agriculture to the environment in terms of natural resource degradation are reduced.

Organic farming is not just a philosophy, but a reality. Many governments has developed laws and regulations and standards to control organic agriculture (based mainly on the Standards and regulations of the International Federation as a basis for local regulations). There are specific regulations and laws of production, labor, marketing and requiring detailed management to determine that the product is organic and to ensure the quality of this production on the one hand, and to protect the consumer's right to obtain a real organic products on the other hand, as long as he pays a higher price for organic products.



Environmental Legislation

Article 10, UAE Law #24 (1999)

for PROTECTION AND DEVELOPMENT OF THE ENVIRONMENT

No pesticides may be imported only after ensuring compliance with chemical and natural specification and analysis of the issuance of this certificate, The applicant and submit to the Commission - through prepared for this purpose - to make sure the model of the availability of the following conditions:

1. For liquid pesticides:

- A. The packaging of the material should not be affected by acids, alkalis, solvents, and can be made of aluminium or any another metal painted on the inside with anti-rust, Anti corrosive and interaction, and may be packaged in glass bottles.
- B. The package must be sealed and closed securely and should have second safety seal and these should be viable to withstand transport and trading conditions.
- C. Packaging should be clearly marked sticker showing all the data referred to in the previous article.

2. For dry pesticides:

- A. It must be improvised from cardboard, aluminium foil or plastic coated cardboard or plastic Cardboard or metal, may not be made of paper.
- B. Packages must be sealed and amenable to withstand all transport and trading conditions.
- C. The weight of the package contents must not exceed for 5 kg.

A trip to the running rainbow...



Have you been to the most beautiful river in the world? Did you see the multiple colored plants turn into a waterfall? Let us travel to Colombia, and specifically to Sarania de Amacarana area south of the Colombian capital Bogota, to watch the running Rainbow River "Caño Cristales" or as some call it the "Five Colors River". Do not be surprised by name; as during the period between July and November this river turns to beautiful water colored painting attracting tourists every year to come to see this fascinating view. Caño Cristales is a small river does not exceed a length of 100 kilometers and a width of 20 meters, but gained fame because of the aquatic plants and varied colors algae (green, blue, black, red, and yellow) interacting and fused together in a combination that looks like a colored furnished bed on the 1.2 billion years old gray rocks.

Tourists can choose their flight times to the river between May and December only, Serrana de Amacrina area also has more than 420 species of birds, 10 species of amphibians , 43 species of reptiles, 8 kinds of mammals and many other sights such as Ongosutura waterfalls, rivers and Canio Caffrey, making the area a tourist destination worth visiting.