The side and beneficial effects of pesticides on pollinators and crops

Environment, Plants

The Use of Pesticides

Pesticides are chemicals used to protect plants and crops from weeds, insects and dangerous molds. Although the use of these chemicals may seem favorable, they've been proven to be extremely harmful to both wildlife, and humans. The amount of pesticides being used presently needs to be changed in order to preserve wildlife necessary for human life. Not only are pesticides killing Earth's pollinators, but they have been proven harmful to human health.

The heavy use of pesticides began in the 1939's, when a Swiss scientist discovered the potent properties of dichlorodiphenyltrichloroethane, or " DDT". Previously, arsenic had been used as a pesticide but many insects had developed a immunity to it, deeming it almost ineffective. By the 1950's, DDT had become the most commonly used pesticide in the United States. It was very effective at first, and used to combat issues such as malaria and other insect borne diseases. DDT lost most of it's effectiveness after five years and was later banned in the 1970's due to its health effects. Years later, the chemical continues to be found in food supplies and in the blood of most humans. It's illegal to use now, except for in small quantities in other parts of the world. DDT has been proven to have effects on humans such as various types of cancer, infertility, nervous system and liver damage. The chemical is also responsible for a major decrease in the population of bald eagles and has also harmed many other animals, including marine life.

Currently, the United States uses several different pesticides that are banned in other countries. For example, Neonicotinoids, which are responsible for killing a large population of pollinators. The main victims are bees, butterflies and bats. In the last five years, over 30% of the bee population has disappeared. A recent study collected from pollen on bees found that many of them were carrying 35 pesticides or fungicides, and then were later used to pollinate crops. These crops are then being shipped and sent to the USA's local grocery stores. As the bee population continues to dwindle from these toxins, so will America's crop production. Bees pollinate most fruits and vegetables and without them humans will surely face consequences.

Unfortunately, pesticide use has also been linked to both acute and chronic illnesses in humans. From cancer and nerve damage, to headaches and nausea. In February of 2009, The Agency for Toxic Substances and Disease Registry had conducted and published a study on pesticide use and children. They found that children raised in houses where their parents used pesticides regularly were twice as likely to develop issues such as brain cancer, compared to children who weren't exposed to the chemicals. There's also a large amount of information on pesticides affecting the endocrine system causing hormone, reproduction, and embryonic development. This results in birth defects, behavioral disorders, hormonal imbalances, incomplete sexual development and more.

Many workers and owners in the agricultural field are arguing to continue use of pesticides, particularly neonicotinoids. Unfortunately, many claim that these pesticides are " harmless" and that they work the best against

destructive insects. Thousands of plant growers are fighting for the use of strong pesticides, and say that they’re vital to the protection of their produce. Although the chemicals may protect shrubberies, and trees from invasive insects, the same chemicals are killing the pollinators used to fertilize other company’s fruits and vegetables vital for our survival. The world’s population is continuing to grow, meaning more mouths to feed as our produce numbers dwindle.

In order to stop the damage on the world’s pollinators, pesticide use must change. If we want to use less pesticides with less chemicals, we’re going to need to change everything we’re currently doing. This means that the products will have to control a larger number of pests, while also being more toxic. The best way to protect pollinators and humans from pesticides would be to rely on sustainable farming, and organic agriculture. Learning to manage harmful insects, weeds and molds in a sustainable way will be the world’s best bet for the future.

Recent studies on farmworkers exposed to pesticides revealed how damaging the effects of chemical exposure can be, especially over long periods of time. More than 100 pesticides have already been linked to endocrine system disruption. Many of these also raise the risk of diabetes, parkinson’s disease, depression and lung cancer. Congress previously charged the Environmental Protection Agency or “ EPA” to test chemicals for endocrine effects, this included the ingredients in pesticides, and substances found in drinking water. So far, more than 100 pesticides have been concluded to be endocrine disrupters. More pesticides are being tested every

year for their effects on humans. A popular weedkiller in the United States was also proven to have cancer causing components. “ Roundup” and many other herbicides contain an ingredient called glyphosate, which the International Agency for Research on Cancer has deemed to be carcinogenic. Glyphosate is also believed to contaminate America’s rivers, lakes and reservoirs.

In the United States, pollinators are estimated to pollinate about 16 billion dollars worth of crops and produce. Many crops depend almost completely on pollinators. America’s use of harsh chemicals continues to put our population at risk, and possibly others around the world. Many big companies are favoring economics over the health and safety of humans and pollinators. If America doesn’t change it’s type and use of pesticides, we will suffer from chemical exposure or lack of crops. Even though pesticides are needed to protect crops from several effects, they’re also used and needed to protect humans from mosquitoes and the many diseases that they carry. Unfortunately, pesticides are something that the world currently needs for several reasons. However, the use and type of chemicals must change. If we continue to heavily use pesticides, humans will continue to get sick from exposure and kill off necessary pollinators. Without it, we are putting ourselves at risk of insect borne illnesses. For now, America must wait for newer, safer pesticides, or a significant decrease in the pesticides that are currently used. If no change occurs, pollinators will continue to perish and the human population in America will suffer from the harmful chemicals and lack of produce.