The Main Ideas Of Silent Spring

The main ideas this book shines a light on are the detrimental consequences that follow the use of pesticides. This includes how us humans are intertwined with nature, therefore, we also are affected if our surroundings are. The need for humans to control and regulate the environment to suit our taste may lead to long term effects but we are too impatient so such effects are overlooked. Such concepts are unfamiliar to the public due to scientists and the government brushing off any negative complications that pesticides pose.

The mass production and careless use of pesticides has caused the death of both good and bad insects, and the spread of chemicals into our water, food and other animals. For example, in the past arsenic was one of the first pesticides to be discovered and used. Carson compares arsenic to modern pesticides such as DDT (Dichlorodiphenyltrichloroethane) and organic phosphorus insecticides stating that the 2 latter cause much more harm. Further elaborating how DDT can become more concentrated as it ascends up the food chain. The chemical also reaches water supplies, and this is shown by fish and birds having DDT in their system which can end up in our system by consuming the animals or simply drinking water. Such pesticides also contaminate our crops by build up in the soil and is then transferred into the animals in which some we consume.

The impulsive use of pesticides without knowing the aftereffects has caused them to infiltrate into our daily lives in such a way that these chemicals are inevitable to be in our bodies and cause harm in the future. “The earth’s vegetation is part of a web life… sometimes we have no choice but to disturb these relationships but we should do so thoughtfully, with full awareness” . Instead of completely stopping, a call for the regulation in the spraying of pesticides would help mend back our environment before it is too late and irreversible damage occurs. Taking into consideration the long term effects of the chemicals in our bodies should be something of much importance when scientists develop pesticides to use.

Another instance is the corruption of the bird population and fish such as salmon which are both as she quoted “nature’s own safeguards and policemen” . The spraying of Elm trees to prevent infectious beetles from inflicting harm on the tree has caused robins to lose their food source which was worms that fed on elm leaves. The same situation occurred with the Miramichi river. Instead, they were spraying forests to protect it from bud worms. This contaminated the nearby river in Brunswick, which contained young salmon that also relied on insects as their primary food source.

This merciless spraying equates to insects becoming resistant to pesticides. Due to insects having short lives, this cycle progresses much quicker that if it were in other mammals. Carson backs this up by insects who have become resistant to lime sulfur and lead arsenate. Pesticides in this manner act as catalysts and speed up the process which then results in creation of new pesticides to treat the resistant insects and the cycle goes on. In simpler terms as Carson says “In the name of progress are we to become victims of our own diabolical means of insect control to provide temporary comfort, only to lose out to destroying insects later on?”. Here she subtly hints that progress should not be considered as always positive, as sometimes progress only leads to more problems.

Humans are exposed to DDT through their food. Carson notes that when laboratory tests are carried, it is in a very controlled environment which does not mirror reality due to the fact that the side effects of DDT on the human body does not show up until after some time as a result of the chemical build up in our body. This is proven when observing the reactions on a cellular level. These chemicals are seen to inhibit oxidation, which is an important for many bodily functions. In addition to that, genetic information can get altered in a similar way from pesticides as if a cell was to be exposed to radiation. This leads to changes in the DNA caused by a process called mutation. When Carson says “Genetic deterioration through man made agents is the menace of our time, ‘the last and greatest danger to our civilization’.” It really puts the matter of the genetic dangers into perspective which shows how detrimental this issue can be for all of humanity.

Synthetic carcinogens are found in a majority of those rapidly produced pesticides which inhibited humans to accommodate rapidly enough to fight off those diseases. The presence of those chemicals can be found in a body of a baby that has not been born yet. The positive correlation between cancer rate and the development of new pesticides in a handful of years suggest there is a direct relationship between them.

Carson ends the book stating different ways we can minimize the use of pesticides. They Include “male sterilization” to decrease reproduction in insects. Another possible technique is the use of sound by using ultrasonic devices that emit high frequency sounds. Finally, as mentioned above, the use of nature and other predators to get rid of them. This minimizes the disruption of the food chain and prevents imbalances from occurring. Although more attention and information has been presented about the issues of Pesticides, it’s effects still haunt us today. One area which has not had a lot of attention and research is how pesticides affect children. Children in some ways are more exposed to side effects of pesticides due to the idea that they are simply unaware of their surroundings and don’t know better.

In uteri, pesticide chemicals can reach them through the mother by eating, breathing or skin absorption of the chemicals. Mothers who breast feed may transfer those chemicals to the new born. Research has shown that around 75 percent of the American population use pesticides in their household. As the child grows up, they can get affected in much more ways. This can translate to children breathing in the contaminated air, being too close to the ground that was sprayed, playing with pesticide products and so on. Another thing many manufacturers don’t take into consideration is that the amount that can cause harm to a child is much less than if were an adult.

Children also ingest more food and nutrients in relation to their body weight in comparison to adults which further increases the chance of pesticides being present in what they eat. In connection to ingestion, a child’s digestive system is not fully capable of getting rid of toxins considering their liver is not yet fully developed. This means that essential nutrients are not fully absorbed because the harmful chemicals block absorption. Children can be prone to malnutrition related sicknesses that cause poor body development and organ failure.Although the government passed on the Food Quality Protection act, this did not take into consideration the long term effects due to build up of pesticides as emphasized by Carson.

Another component that comes to play is the mental effects. A child’s brain is developing at a high pace, building new pathways. This results in important achievements a child goes through as it grows up such as speech, walking, writing, motor skills, critical thinking, emotional

intelligence and so on.

Being prone to pesticide exposure in womb has shown to be detrimental to the baby's cognitive, emotional motor, and social skills. At birth, these chemicals were observed to decrease verbal and memory skills, meaning a delay in speech and a hard time remembering things. The way the chemicals work to achieve those effects is by destroying enzymes such as acetylcholine (found in motor neurons) which regulates neurotransmitters.

A recent article published on March 21 2019 further emphasized our worries that these poisons are in fact effecting brain development in children. The article compares children living close to places where pesticides were sprayed continuously to children who lived further from such areas. The result indicated that living next to sprayed areas can increase chances of being born with autism up to 50 percent.

With exponentially high numbers, it caught the attention of The Autism Society of merica which further backed up the data by stating that more research should be done In order to identify it as a direct cause of autism.

With all this in mind, it is very clear that there are serious issues that come along with the use of pesticides that can produce soon to be irreversible consequences. Some examples include diseases in humans and animals, loss of some animal species by killing its source of energy which are insects. The environment is harmed by air pollution, global warming and pollution of water in oceans and rivers. Although Carson provided the first push towards solving issues to do with pesticides by providing us with the basic arguments and the evidence to support them, we need to continue the environmental movement, stop the reckless spraying and advocate our rights as this is no longer just a means of getting rid of unwanted pests. This has become a global hazard that will continue to tear our ecosystem apart if we sit idly and do nothing. If we don't save ourselves, who will?