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GMO is The Real No-No

GMOs/GMFs, or better known as Genetically Modified Organisms and Genetically Modified Foods are the epicenter of the agriculture industry in more than twenty-eight different countries. However, contradicting the thriving industry of these GMOs/GMFs are the over three dozen countries that prohibit and/or ban their cultivation. GMOs and GMFs have had their DNA artificially altered to allow for a more successful end result of product. This is not a process that would naturally happen in nature. “This is done by introducing genes from a completely different species in order to boost the plant’s resistance to pests or herbicides or create some other desired effect.” [1]

Although the United States has had only minor uprisings against the products since 1992. The products gained a strong opposition in 2015, when a “majority of the European Union nations decided to block the cultivation of new GMOs within their borders, and Russia issued a ban on both cultivation and imports.” [2] Oddly enough, although most European nations prohibit GMO cultivation; they still allow GMO products - most of which, animal food - to be imported. Nations that allow importation of GM grain rake in, on average, 30 million tons. GMOs and GMFs have major economic effects throughout the world, over “eighteen million farmers in twenty-eight nations around the world - 20 developing countries and 8 industrialized nations - cultivate GMO crops on nearly 450 million acres.” [2] More than 50% of genetically engineered

crops are soybean: 30% corn, 13% cotton, and 5% canola. Worldwide production operates at just under half a billion acres, with the United States holding more than 175 (million) acres. Brazil is second with 110 million acres. [2] According to the Centre for Research on Globalization, "the cost of growing one acre of non-GMO corn was $680.95, the cost of growing an acre of GM corn was $761.80." [3] The difference is about $80.85 more than natural corn, and sometimes can cost up to $150 more than regular seeds.

As Monsanto states, Roundup herbicide and Round-up tolerant GM Maize have no negative effect on the human body due to studies done on rats. Which has similar immune systems to humans. However, when German scientists looked back on Monsanto's tests, they discovered the tests were conducted for a mere three months. This is logically not enough time to properly survey long-term effects. This prompted a long-term study which was done on GM products, and "is the first, and to date, the only attempt to follow up Monsanto's investigation and to determine whether the differences found in the NK603 GM maize-fed rats, especially with respect to liver and kidney function, were not biologically meaningful, as claimed, or whether they developed into serious diseases over an extended period of time." [4] The test was extended from "90 days to 2 years," [4] and "used three doses of GMOs and Roundup to determine treatment dose response, including any possible non-linear as well as linear effects." The findings of the test brought out interesting results; very different from Monsanto's initial discoveries.

"Tumor numbers were rarely equal but almost always more than in controls for all treated groups, often with a two - to threefold increase for both sexes." [4] On average, tumors reached a large size, 94 days before controls in treated females; and up to 600+ days in GM fed, male groups. According to the study, largest tumors were, in total, five times more frequent in females

than in males. By the fourteenth month, “no animals within control groups showed signs of palpable tumors; on the other hand, 10-30% of treated females per group developed tumors, with the exception of one group. By the 24th month, 50-80% of female animals developed tumors in all treatment groups… whereas only 30% of controls were affected.” [4] By the end of the experimental period, tumors in GM-fed rats were twice as frequent as in controls. In regard to mortality rates, males survived an average of 624 days; and females, and average of 701 days. And at the culmination of this experiment, “three males and two females in the control groups died spontaneously… while up to 50% males and 20% females died in some groups containing GM maize.” [4]

GMO crops have yet to make a lasting effect on the human race; however, since the 1990’s bee health and population has been heavily declining. Most in part, to the toxic chemicals that limit biodiversity; and proliferation of GMO monocrops. You may ask how the United States plans to counteract the loss of the bee population. Fear not, Harvard Roboticists are developing titanium and plastic-made robot bees, “that can pollinate vast, dystopian field of GMO cash crop.” [5] The Harvard project has been in movement since 2009, and they soon believe they will have the means to assemble an artificial hive and allow for them to communicate amongst themselves and locate particular crops. Further reports also link potential military uses; such as surveillance and mapping. Could the war on artificial intelligence already be starting? Take into account a 2013 beekeeper’s attack on a media drone, where a keeper’s bees attacked and brought down a media drone. [6]

The gene within a spider that helps it to produce silk, does not belong in the DNA structure of a goat; nor does the anti-freezing gene in North American White Flounder belong in our very tomatoes; because it is not naturally sound. The Earth is made for crops to fail; and

animals to produce only certain, profitable items. By altering the DNA of such organisms, not only are you disrupting society as a collective, but you are also entirely altering the genetic make-up of an organism as a whole. In a sense, you are creating a Cyborg; minus the mechanical make-up of a Cyborg itself. With the altering of DNA, there is complete reason to believe that mutations are very present in this process. Being that if you insert one more gene, one of the pre-existing genes must go away; simply due to only a certain amount of genes being able to make-up the DNA. Which leads to KFC chickens having seven wings or Shamrock Farms cows having enlarged, over-blown muscles. By altering the natural make-up of organisms, we are putting resistance on the natural cycle of life. The cycle of living and dying, most of all.

Lastly, the extreme inflation of GMO crops does not allow for all countries to capitalize on the market it brings. Being that prices are between $80-150 more than regular seeds, many 2nd and 3rd world countries cannot afford to bring mass amounts of GMO crop to produce mass amounts of food for relative inhabitants of the country. This being so, countries like Somalia, Uganda, Cambodia, and many other countries are left starving, impoverished, and left to survive on their last means of life. Which only further paints a picture of selective, biased marketing in the global economy. As a whole Earth, should we not want to make any and all areas of life, thrive? Being that, if more countries produce more GMO crops; there is more profit for all countries involving in GMOs, to be made.

As we look at the GMO problem, there are many reasons GMOs can make an outstanding impact on our society, for positive reasons. Such being, crops that can grow at any and all times of the year or being resistant to disease and/or death. However, the negative connotations most definitely outweigh the positives of GMOs. For example, the build-up of tumors over time, the

immense cost of the crop itself and the impending push towards artificial intelligence. As the on-going research of GMOs continues; it is clear that Monsanto has faulted in their initial research; and the FDA, along with a multitude of other organizations, have failed to analyze the long-term effects of GM crops both on agriculture and human life. That being said, the immediate re-evaluation and ban of GMOs and GMFs would behoove the United States. As well as many other countries which do not hold anti-GMO laws. For the true sake of human life.

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