The woes of GMOs - Glyphosate and GMOs Impact on Crops, Soils, Animals and Man

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What we have in our fields, our farms, and our homes is not natural! The increased disease, pest pressure, and empty calories are NOT normal! Corn used to be the healthiest plant you could grow. Now, multiple diseases, pests, and weak plants are the common denominator of 'modern' hybrids. Wheat, that staple grain for mankind, is now loaded with toxins, allergens, and chemicals. Sickness and disease are increasing in our crops, animals and people in spite of the broad array of fungicides and drugs administered. One can only ask, what has changed so drastically in this ecology we call farming?

Over three decades ago we started the shift to a monochemical glyphosate herbicide program that was soon accompanied by glyphosate- and insect-resistant genetically engineered crops. These two changes in agricultural practices - the excessive application of a strong essential mineral chelating, endocrine-disrupting chemical for weed control and the genetically engineered production of new toxins in our food crops - was accompanied by abandonment of years of scientific research based on the scientific precautionary principle. We substituted a philosophical "substantially equivalent," a new term coined to avoid accountability for the lack of understanding of consequences of our new activities, for science.

Glyphosate is a strong organic phosphate chelator that immobilizes positively charged minerals such as manganese, cobalt, iron, zinc, copper, etc. that are essential for normal

physiological functions in soils, plants and animals. It is this ability to shut down physiological functions and predispose plants to killer diseases that make it such an effective broad-spectrum weed killer. Glyphosate is also a very powerful selective antibiotic that kills beneficial, but not pathogenic, microorganisms in the soil and intestine at very low residual levels in food. Residue levels permitted in food are 40 to 800 times the antibiotic threshold and concentrations shown in clinical studies to damage mammalian tissues.

By genetically engineering plants with the insertion of certain foreign bacterial genes, glyphosate can be applied directly to crop plants without killing them. There is nothing in the genetic engineering technology that does anything to the glyphosate that is applied to the plant and that accumulates in it. Both the toxic proteins produced by the foreign bacterial genes and the glyphosate chemical now are present in the feed and food produced for animal and human consumption. Genetic engineering has introduced other genes for insect resistance where additional toxic proteins accumulate in plant tissues consumed by animals and man. These toxins are found in the blood and readily transferred across the placenta to developing babies in the womb.

Genetic engineering is more like a virus infection than a normal breeding process and results in a multitude of mutations and epigenetic effects as genetic integrity in the plant is disrupted. These 'foreign' bacterial genes are highly promiscuous and easily transferred by wind or insects to other plants; to soil microorganisms during plant residue decomposition, or to intestinal microflora during food digestion where they continue to direct the production of toxins and allergenic proteins. Epigenetic effects are manifest in GMO plants as a yield drag, poor nutrient efficiency, increased disease, and reduced stress tolerance.

Abandonment of the "Scientific Precautionary Principle" that had provided a level of protection in the past, means that we feed and eat at our own risk - as the genetic engineering companies stipulate emphatically on their technology agreement. Scientific studies and clinical responses show that the assumptions of benign effects and rapid degradation of glyphosate, allergenic proteins, and toxins are invalid. Consequently, we are witnessing the development of super weeds; super pathogens; the loss of natural biological controls of plant, animal, and human pathogens; and degradation of our soils and beneficial microorganisms that are required to produce an abundance of nutrient-dense, safe feed and food. The consequences are observed as lower yields, poor nutritional quality, increased disease, and rampant infertility and birth defects.

Future historians may well look back upon our time and write, not about how many pounds of pesticide we did or didn't apply, but by how willing we are to sacrifice our children and future generations for this massive genetic engineering experiment that is based on flawed science and failed promises just to benefit the bottom line of a commercial enterprise.