



Genetically Modified Organisms (GMO) –

A **Genetically modified organism** (GMO) or **genetically engineered organism** (GEO) is an organism whose genetic material has been altered using genetic engineering techniques to overcome natural boundaries for the organism. Genetic engineering involves crossing traits that may not or could not cross in nature. These techniques are generally known as recombinant DNA technology. With recombinant DNA technology, DNA molecules from different sources are combined in-vitro into one molecule to create a new gene. This DNA is then transferred into an organism and causes the expression traits desired in the end product. Genetic engineering of organisms has produced great leaps forward in the production of synthetic organics such as drugs and human hormones that provide tremendous benefits to human kind. One of the very first was the production of human insulin.

However, even with regard to this technology's great potential, some people have raised concerns about the introduction of genetically engineered plants, animals and bacteria into the environment and the unknown effects and potential dangers of these organisms on the natural world. It is feared that these organisms have the potential to spread their modified genes into native populations thereby disrupting natural ecosystems. It could take years for the potential effects on the ecosystems health to develop. Many others feel that the benefits to be had from Genetically Modified Organisms will make life healthier and better for all.

The use of GMOs has ignited a great deal of controversy in the market and other areas. Some groups see the use of GMOs as interfering with nature, while others are concerned about a lack of understanding for the potential negative ramifications of GMOs.

The response to GMOs has been varied but in 2004 Mendocino County, California was the first in the country to ban the production of GMO crops. In 2005 various Canadian governments followed suit in banning GMOs and since then many others have followed as well. There is little consensus on the use or effects of GMOs and though there is a vast benefit to be had by using genetic engineering, more needs to be done to determine if there is longer term harm.

NXC Technologies is concerned about the impact GMOs may have on our natural world and human health. Until more is known about GMOs and their effects on the environment and human health, we are using caution with any GMO. Since our inception, NXC has had a non-GMO policy, and we only source non-GMO ingredients (bacteria and enzymes) for all our biological based products.