



GMO or GE?

What's the difference? What's the big deal?

Every year we receive letters, emails and calls wanting to know if Hart's seeds are free of "GMO's". We get these inquiries because people have heard that GMO's are unsafe and they want to know that the food they grow from Hart's seed is safe for their family.

The use of the term **GMO** (Genetically Modified Organism) has been used in the media interchangeably with the term **GE** or Genetically Engineered organism; these are not the same.

What's the difference?

GMO – Genetically Modified Organism is as a very broad term. In its most simple terms, it refers to any living thing that has different DNA, no matter how slight, than its parent. This can happen in nature or in a laboratory. When you look in a mirror, you are looking at a genetically modified organism. The DNA of each of your parents has combined to make you who you are. You are not identical to either – you inherited some DNA from both. This also happens in the plant world; when insects or the weather moves the pollen from one plant to the flower of another plant of the same or similar species. The new seed from that plant 'mating' produces a new plant different from either of the parent plants. This is a type of **hybrid*** (and so are you). **Traditional Plant Breeding** is simply choosing the two parent plants that you would like to 'mate' and playing the role of a bee moving the pollen of one to the flower of the other. By saving the seed from that union, the plant breeder hopes to have a new plant that will incorporate the best qualities of each of the parents. Some of our favorite vegetables and flowers are traditional hybrids that have been around for many decades such as Silver Queen Corn and the fragrant Bourbon Rose. These varieties and how they were bred are not the ones that have been the focus of the media.

GE – It's Genetically Engineered seeds, crops, fish and hormones that have been the source of concern in recent years. These are created in a laboratory. In genetically engineered plants, the 'mating' process is completely bypassed and often the DNA introduced is from a completely unrelated organism such as a bacterial pesticide or herbicide resistant protein (this is called a transgenic crop). These plants do not occur in nature. Because this new genetically engineered plant has different DNA than its parent plant, it is one type of a GMO.

In short, all crops have been genetically modified from their original wild state by domestication, selection and controlled breeding over long periods of time, but most GMO's are not genetically engineered. By the continued misuse of the term GMO, we doom ourselves and condemn our farmers unfairly.

The Hart Seed Co. does not distribute ANY seed that has been produced through genetic engineering. Period.

That's our promise.

To distinguish ourselves from other seed distributors, we've introduced this new logo to assure our customers of our continuing commitment to that promise from our family to yours.



Please visit the resources listed below for additional information:

<http://ezfromseed.org/files/2012-spring-press.pdf>

http://www.usda.gov/wps/portal/usda/usdahome?navid=BIOTECH_GLOSS&navtype=RT&parentnav=BIOTECH

*Hybrid – An animal or plant resulting from a cross between two genetically unlike individuals.

<http://www.thefreedictionary.com/hybrid>

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