

ORGANIC FOODS VS GM FOODS!!

Let's begin by first clarifying the confusion between organic foods and conventional foods. These two are not the same!



Organic crops are grown under a farming system which avoids the use of synthetic fertilizers, pesticides and other agro inputs, unlike conventional farming where the use of artificial agrochemicals is permitted.

This may come as a shock, but yes, almost all the produce on our local markets are obtained from the latter, and in some unfortunate cases, they are sprayed with pesticides right before they are harvested and brought to the market. (A discussion for another day)

Another point to note is that organic foods come with much higher price tags than conventional counterparts, because of the production, handling and certification processes involved.

You may have read on the internet, or heard on the radio, tv or even at a public seminar where activists discuss the superior value of organic foods over conventional foods and more recently GM Foods. Others have also touted GMOs as be-all and end-all of our existence in comparison with conventional and organic foods. Truth be told, any debate which discusses GMOs and organic foods in parallel, and portrays one as being the better choice over the other, is neither scientific nor sound. Comparing organic foods with GM foods are like comparing apples with oranges.

Why is this so?

Organic foods are a product of a type farm management system, whereas GM foods are products of a type of breeding technology (Genetic Engineering).

Breeders employ different breeding techniques to develop crops with desirable traits for planting or farming, and genetic engineering is one such technique which has been

used to obtain crops with insect resistant, herbicide tolerant, salt-tolerant and nutrient enhanced traits among others.



Organic crops on the other hand, as earlier on explained, are obtained from a farming practice that limits the use of synthetic agro chemicals.

Many organic farms apply **Bt** proteins to control insect pests. **Bt** stands for the naturally occurring bacterium *Bacillus thuringiensis* which lives in the soil and is found all over the world. Some types of this bacterium produce protein crystals i.e. **Bt** proteins, that have selective toxicity for insects only. These protein crystals have been used in organic farming for over 50 years to control insects. Interestingly, majority of the commercially available GM crops in the world been engineered with Bt genes to produce these same proteins to protect themselves from insect attack.

So technically, can GM crops be grown organically, and certified as ORGANIC?

This is not possible in the US as the USDA includes bioengineered genes in its list of prohibitions for organic farming.

Currently, there are no such prohibitions in Ghana. The Food and Drugs Authority together with all relevant regulatory agencies are committed to ensuring that food, be it organic or Genetically Modified are safe for consumption.

Prepared By:

Biosafety UNIT

Agro Products and Biosafety Department