New Crops and Genetic Engineering

Genetically Modified Organisms (G.M.O’s): also called transgenic varieties have D.N.A containing genes from entirely unrelated species.

 Ex. “Golden Rice,” contains a gene from daffodils (flower) that make the rice produce beta-carotene, a critical nutrient in many poor countries

Currently 12% of the world crops are genetically modified or 114 million hectares

4 crops allowed in Canada that are genetically modified

Canola – herbicide tolerant

Corn – insect resistant, herbicide tolerant

Soybeans - herbicide tolerant

Sugar Beets –herbicide tolerant

Pest Resistance:

(Bt) Bacillus thuringiensis, a bacterium makes toxins that are lethal to butterflys and beetles that is inserted in specific genes.

Bt Corn seed has been designed to protect against corn borer – a worm that eats, lives in and kills corn stalks.

 Bt Crops

* Reduce the amount of insecticide being sprayed
* are not allowed to be exported in to the European Union (EU)
* Are feared to breed with wild plants
* May create ‘super bugs’ that can withstand the Bt toxins

*Horizon Jimmy's GM Food Fight BBC Documentary*

*http://www.youtube.com/watch?v=iR\_WGLpqhkk*

In your notes, please copy down this graphic organizer. (5-8 terms per side using bullet points)

Reasons for Genetic Modification Reasons against Genetic Modification