

TRANSGENIC FOOD (GMO's)

¿What are the
transgenic?

¿Are they
harmful?

¿What are their
advantages?

¿What are their
disadvantages?

MYTHS ABOUT GMO's

Have you heard about Synthetic Biology? What is the first thing that comes to your mind? When you hear about this concept? Did you know that Synthetic Biology can help us to solve problems in medicine, industry, agriculture, in the environment?

One application of the Synthetic Biology would be the transgenics or GMOs (Genetic Modified Organisms) in food.

TRANSGENIC FOOD

Maybe you have heard about this topic but here are a lot of myths about GMOs. In this article we will let you know a little more about the transgenics or GMOs, their advantages and disadvantages and the impact they have in society.

First of all, ¿What are the GMOs? The Genetic Modified Organisms means that the genetic code of a plant or an animal is transferred to another organism. This can be done because the genetic code is universal for all the organisms.

¿Did you know that... se it is possible to transfer the gene that produces insulin in humans into a bacterium and that bacterium will produce exactly the same protein (insulin) as the humans do?

In the same way is how transgenic food works. They are modified to improve their production, to reduce the use of pesticides, to accelerate their growing, to add them more nutrients, etc. (<http://www.nlm.nih.gov/medlineplus/spanish/ency/article/002432.htm>). For example, some people have vitamin A deficiency and they can be vulnerable to infections and to develop blindness. Transgenic rice is modified in order to contain vitamin A and iron so they can decrease the effects caused by the deficiency of these nutrients in people that their diet is based mainly in rice (<http://www.creces.cl/new/index.asp?tc=1&nc=5&imat=&art=550&pr=>).

However, the use of these GMOs has not been accepted by society in a lot of countries. Some organizations, web pages, social networks, and some others social groups show information about the disadvantages of using the OGMs in order to persuade people to be against them.

Image retrieved from:
<http://www.laverdadyucatan.com/wp-content/uploads/2012/10/2139.jpg>



This information is found in blogs, social networks, in the internet, and people that are not informed about this simply see the images and phrases such as “Non natural”, “Monopoly”, “Cancer”, and they have a negative concept of the GMOs without really knowing the reliability of this information that they are receiving.

Our team tried to contact companies which were against the transgenic, we thought that one of the most important case is Greenpeace; nowadays in our country this organization is trying to stop the production of transgenic crops of corn saying to all the people that these food is bad and cause a lot of diseases including cancer, this last according to an experiment made in another country.

Image

retrieved

from:

<http://blogs.20minutos.es/cronicaverde/files/transgenicos543.jpg>



**¿QUE NO DECIDAN
POR TI!
TRANSGÉNICOS
NO**

www.quenodecidanporti.org

GREENPEACE

We investigated about this topic and we found an article in which is exposed that mice in the experiment, which ingested those crops, developed different tumors as the organization Greenpeace said. But Greenpeace doesn't mention those mice were already predisposed to develop the tumors and the scientist which was supposed an expert in cancer, works in a company in charge of announce risks about transgenics.

(<http://naukas.com/2012/09/20/transgenicos-que-producen-tumores-no-panic/>)

One of our member, Mario, is with constantly contact with Greenpeace in the movements it realizes but when he tried to ask them about why are them against the transgenic, they just ignored him without caring he's a member of them. Then he tried to ask in the publications on facebook about the protest of those aliments and the people just said they were cancerous, biodiversity was going to disappear and some of them that transgenics were evil and from the devil.

Then, we tried in other facebook pages like “Animales de la Madre Tierra” and the same happened, but this in a different perspective. This page on facebook is on charge to make conscience on people for loving animals and being vegan, we proposed them if they wanted to eat all the nutrients without eating meat the transgenics could be a very good option and then the administrators answered: “Those kind of aliments are used for animals whom will be massacred by humans, we couldn’t allow that”, after that people started for saying the same things and others that they produce cancer sending us to the same answer.

Image
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from:
[http://blogs.20
minutos.es/cro
nicaverde/files
/transgenicos5
43.jpg](http://blogs.20minutos.es/cronicaverde/files/transgenicos543.jpg)



When we tried to talk with Greenpeace we met a person who was in pro to GMO telling us too about the experiment we said and he gave us examples about companies already using biotech like yogurt and the necessity of this to don't saying that contains bacteria. Also an example of how hearsays cause bad impressions for other companies: "A lot of companies had suffered hearsays about cancer like the Coca-Cola company with Coca-Cola zero and its artificial sweetener saying that we can't digest and stays in our body forever, but the true is that, we don't digest it and the same substance is excreted for our body" he said.

In order to see like a general view of the people acceptance about the use of GMO's in our community, we decided to do surveys to random people.

Our surveys had the following information:

Encuesta sobre transgénicos

¿Do you know about transgenic?

Yes _____

No _____



(If you answered NO see the information at the back)

In a general way, are you pro or against the transgenic? Pro _____ Against _____

For you, the transgenics is a topic

Indifferent _____

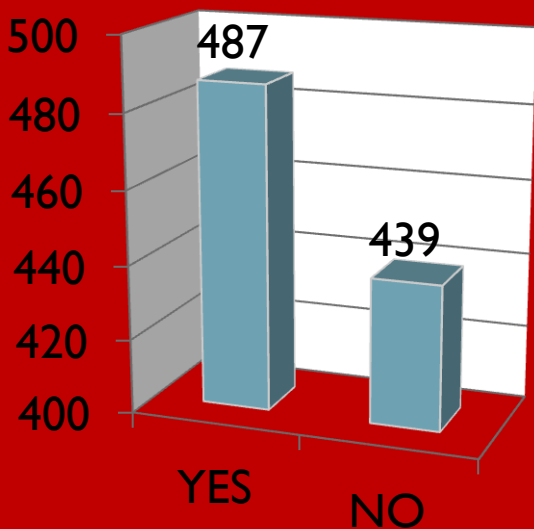
interesting _____

Transgenic are produced from an organism genetically modified thanks to the Genetic Engineering.

In other words, it is food obtained from an organism with desired characteristics that improve their production such as a faster growth, more nutrients, etc.

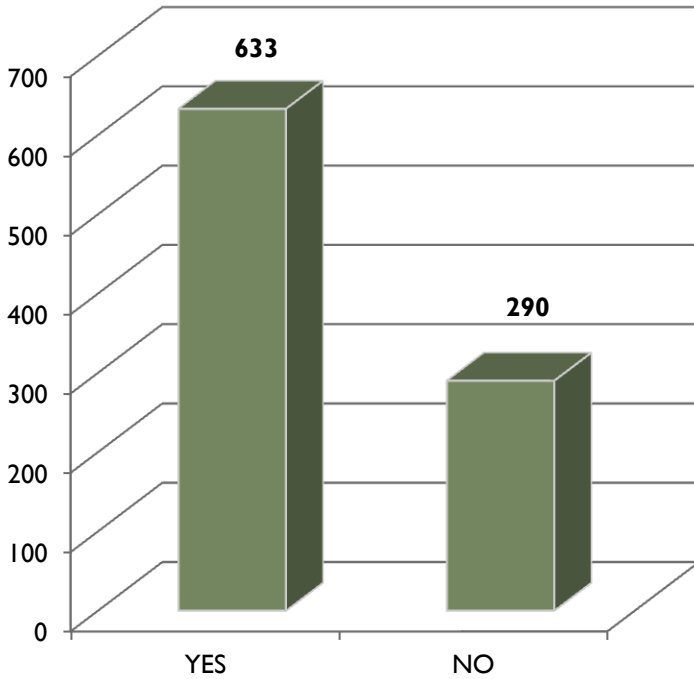
Nowadays, the ones that are used more frequently are from corn, soy and barley.

Based on the data obtained we got the following graphs.

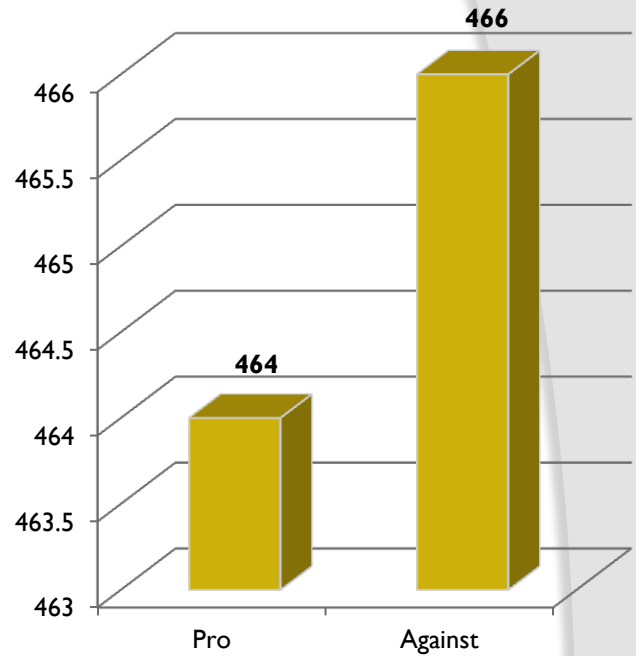


Do you know about transgenic?

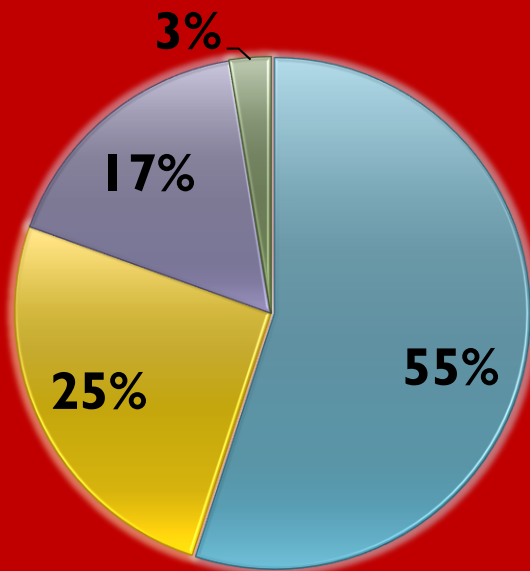
Do you find interesting this topic?



Are you...?



We can see that more people have heard about transgenic but there are people that still don't know about this topic. Also there are a lot of people that are against transgenic but we wanted to know the reasons and here there are the most common:



- They are not healthy
- They are not natural
- Religious reasons
- Monsanto

The use of GMO's is a very polemic topic and there are arguments pro transgenic as well as against them.

We see in the opinions that they have incomplete information about this topic. Why?

- They are not healthy: Some transgenic have the nutrients that can't be obtained with the natural organism such as the transgenic rice. Everything is harmful in excess. We may find unhealthy a lot of things such as using the microwave, drinking alcohol, smoking and these activities are socially accepted. Transgenic have been used several years ago and harmful effects have not been found yet.



- They are not natural: In agriculture and farming the selection of species to improve the production of the animals has been used from centuries ago. The transgenic may not be natural but the proteins produced are the same in plants as they are produced in animals.

- Religious reasons: This is a very polemic point. The use of transgenic is an activity done by humans, some think they are playing in being God but almost everything is modified by humans: industry, farming, agriculture, investigation, the environment, etc.

- Monsanto: Monsanto is a company that uses transgenic and is trying to become a monopoly. People does not agree with the idea of the monopoly and they associate this to transgenic that's why some of them are against transgenic.

Also, in the answers we got we find a big variety. Here are some of them:

“against, nono wait, in pro.”

“aah well, I’m in pro because what you are doing is to modify them genetically and no using chemicals to change them, that woul be worse and they will affect us by biomagnifitcation, and well if they are genetically modified they won’t affect us.”

“well... I wouldn’t know what to say, I think I am in pro...”

“I believe that they are very harmful, I prefer natural food”

“it depends on how you use them. I don’t agree in stopping the advance of technology because of religious prejudices”

“Mmm pro but I need them to be tested and approved”

“Yes, I agree as well as they are not harmful for us”

“Nothing better tan natural”

“I don’t know”

“I’m in pro but I would like to have more information about this”

This kind of food is a very big opportunity for the society to grow up, maintaining always present the bioethics, biotechnology is relatively new and society has not adapted and does not know how to act when listen words like GMO or transgenic and these associations like Greenpeace just degrade these words and biotechnology social concept.

We noticed that most of people says, the GMO are not natural and thinks it contain chemicals that cause this “cancer”, and our team tried to recommend to persons for searching their own information and not be persuaded by false sources.

We also think that providing more information would help people to decide if they agree or not in the use of the GMO's. We also think that they are not bad by themselves but the use it is given to them. Bioethics is very important and providing information too. We cannot decide if we don't really know about this. Don't you think so?

conclusion