

Video study : **What is genetically modified food?**

<https://www.scientificamerican.com/video/what-is-a-genetically-modified-food2013-07-24/>

1. Give examples of genetically modified organisms :

- pigs that glow in the dark
- chicken that grow without feathers
- goats that produce spider silk proteins.

2. Why are GMOs so controversial for some people? Give two reasons.

- eating someone's science project / disgusting / scary
- not natural / whole = organic food

3. Describe the first methods used by Mankind to genetically modify organisms.

- selecting plants with desirable traits
- mate the plants over and over
- molding species to meet their dietary needs.

4. Explain the example of corn.

- first = teosinte (small, inedible kernel / nut)
- modified the DNA / 5 changes to its genome (long strands of DNA that encode for proteins)
- => corn (artificial selection)

5. Give example of common foods that were genetically modified to become edible.

- rice, almonds, wheat, bananas.

6. What is the difference between ancient and modern techniques?

- more precise, much faster
- more direct : select a trait, snip it out and transplant it into another organism.

7. What do these words mean?

- CISGENIC : snippets coming from the same species.
- TRANSGENIC : snippets coming from a different species.

Give examples.

- Pigs glowing in the dark : gene from a luminescent jellyfish.
- corn that produces bacterial toxins deadly to pests.
- tomatoes creating antifreeze proteins (from fish)
- cows that produce human milk.