

**GENETICALLY MODIFIED
ORGANISMS (GMOs)**

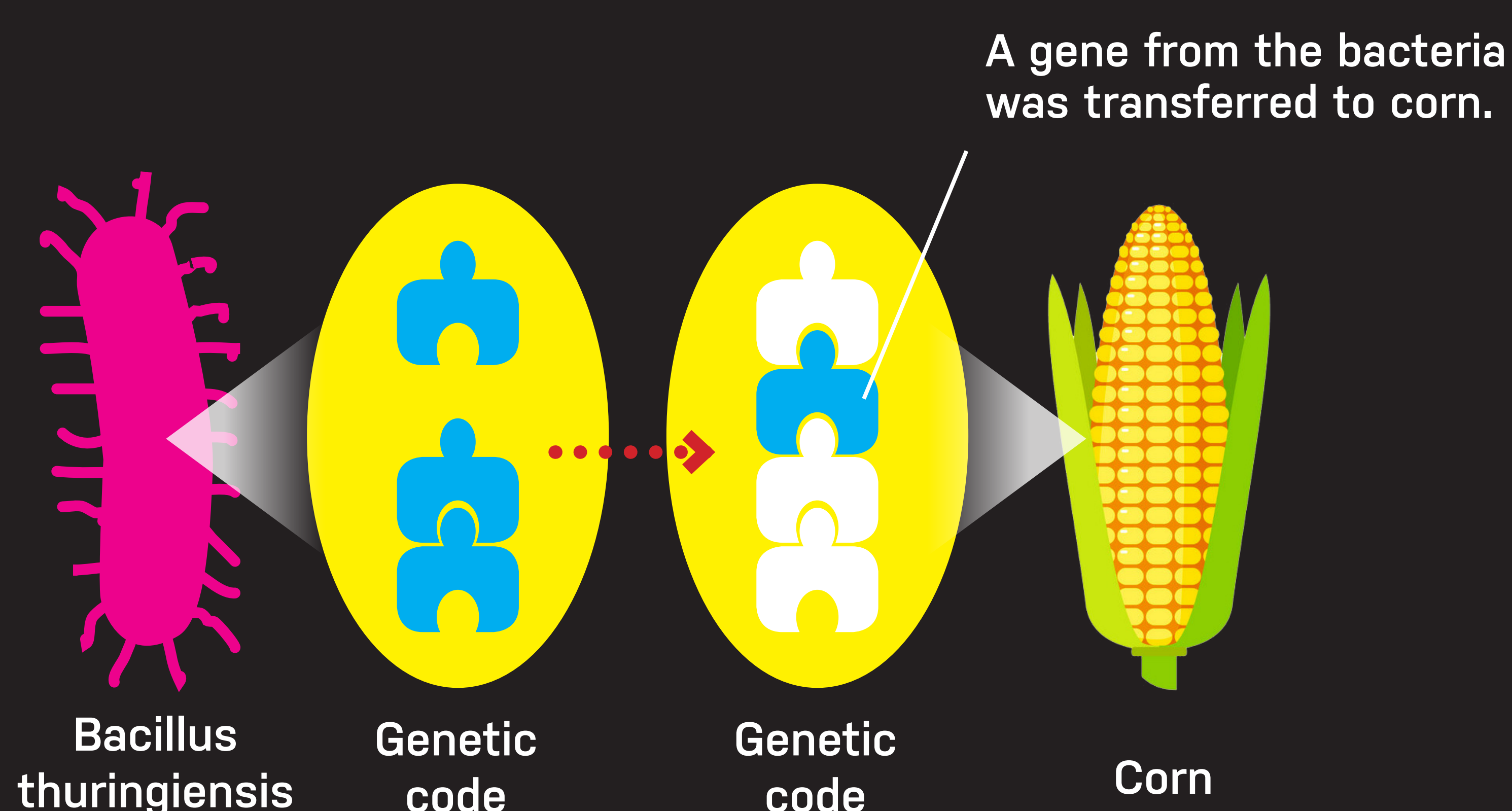
Genetically modified foods (GM foods) are foods that contain genetically modified organisms (GMOs) or are made from them. We can define the GMO itself as an organism whose genetic material was intentionally changed by mankind not by natural cross-breeding, but using genetic engineering methods.

DNA CHANGE METHODS

TRANSGENESIS

Part of the DNA of one organism species is transferred to the DNA of an organism from another species.

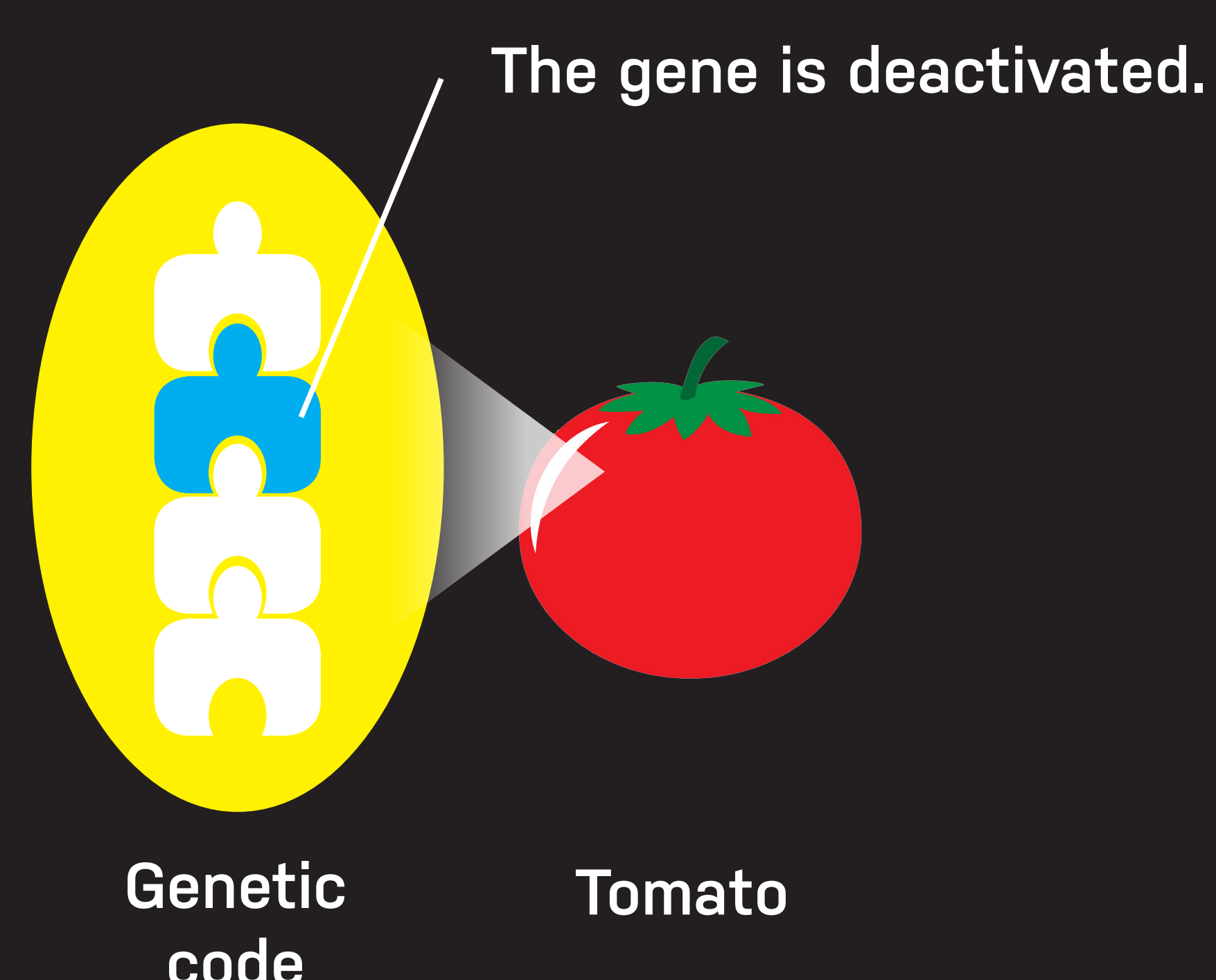
Example: Corn is inoculated with a gene of the *Bacillus thuringiensis* bacteria, thanks to which corn is resistant to the corn borer.



CRISPR

The organism's genes are also influenced.

Example: The genes that cause softness in the tomato are suppressed.



GMO SUPPORTERS VS. GMO OPPONENTS

SUPPORTERS

- Plants with genetically modified resistance to pests do not need as many chemical protective sprays and hence save the environment.
- GMOs may have positively influenced nutritional properties. For instance, the plant nutrition is enriched with vitamin B12, or rice is enriched with Iron or provitamin A.
- Thanks to their 'added values', the GMOs may share in the eradication of hunger worldwide.
- GM animals are resistant to diseases and may have a shorter growth period.

OPPONENTS

- Farmers who grow GMOs resistant to herbicides and other chemicals have no obstacles to the use of large quantities of these chemicals, thanks to which weeds and pests may become resistant.
- GM plants may infect naturally growing plant communities with their genome.
- Corporate power. GM products are patented and their sale is controlled by only a few supra-national corporations, which determine the prices. Moreover, GM products cannot reproduce and for this reason the farmers must buy seed every year, which is a financially demanding task.
- It is not natural and ethical.

WHICH GMOS HAVE BEEN MADE?



