

It has been 25 years since biotech crops were first planted. Since then, GM crops and biotechnology have not just transformed agriculture by providing a valuable tool for farmers, but they have helped the environment and rural communities around the globe.

Biotech is great for the environment and provides an important tool for tackling climate change. This is thanks to...

## Reduced carbon dioxide emissions

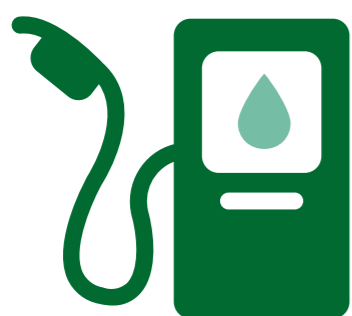


Biotech crops require fewer passes by tractors and less fuel, which has helped to prevent the release of

**34 BILLION KG** of CO<sub>2</sub> since they first came to market, equivalent to removing **22.7 million cars** from the road



Over the past 25 years, biotech crops have helped farmers be more efficient, helping to reduce pesticide applications by **776 MILLION KG** a global **reduction of 8.6%**



Thanks to this reduction, the agriculture industry has cut its fuel use by an estimated

**12,799 LITERS**



Because biotech crops allow for no-till farming, more carbon remains in the soil. In 2018, the environmental gains from this carbon sequestration were equivalent to removing **13.6 MILLION** cars from the road



Biotech #FoodHeroes

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Leaps in biotech innovation have been instrumental in increasing yields and providing...

## Greater food security



**108 MILLION**

people in food crisis-affected countries are facing food insecurity, and GMOs can help play a crucial role in tackling this issue through increased yields and crops that help fight food waste.



Thanks to improved pest and weed control, plant biotechnology has helped farmers to grow an additional

**498 MILLION**

tons of maize since their introduction



Plant biotechnology has also been responsible for the additional production of **278 million tons** of soybeans, **498 million tons** of corn, **32.6 million tons** of cotton, and **14 million tons** of canola over the past

**23 YEARS**

as farmers have been able to grow more on the same amount of land



Without biotech, farmers would have needed

**24.2 MILLION**

more hectares of land to produce the same amount of food in 2018

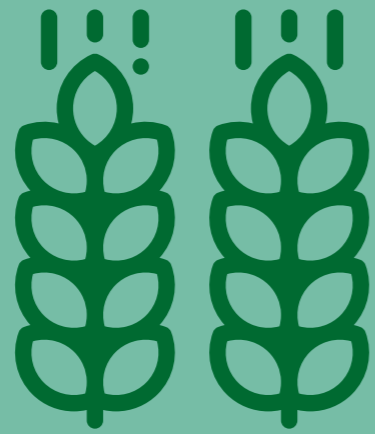


**Biotech #FoodHeroes**

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Plant biotechnology has helped farmers and families around the world, creating a ...

**Better quality of life**



**\$135  
MILLION**

The average cost of discovery, development and authorization of a new plant biotechnology trait is around **\$135 million**



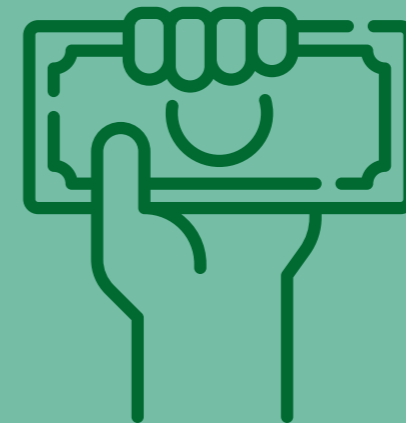
**\$96.2 BILLION**

Female farmers have realized an extra **\$96.2 billion** in income since the introduction of GM crops, which improves not only their quality of life, but that of their families and wider communities



**\$4.42**

In 2018, farmers in developing countries received **\$4.42** for each extra dollar invested in biotech crop seeds



**16.5 MILLION**

This means that growing GM crops have helped **16.5 million** farmers, their families and their communities, mostly in developing countries, over the past 20 years.



**Biotech #FoodHeroes**

# CELEBRATING 25 YEARS OF BIOTECH

It has been 25 years since biotech crops were first planted. Since then, GM crops and biotechnology have not just transformed agriculture by providing a valuable tool for farmers, but they have helped the environment and rural communities around the globe.

Plant biotechnology has helped to lift entire communities out of poverty, creating a ...

## Growth in farm income



Thanks to enhanced productivity and efficiency gains, GMOs have helped increase farm incomes by **\$225 billion** over the past **23 years**



GM insect resistant technology has added **\$59.5 billion** to the income of global maize farmers, while GM herbicide technology in soybeans has delivered **\$64.2 billion** of extra farm income



For each dollar invested in biotech crop seeds in 2018, farmers worldwide gained an average **\$3.75**



**Biotech #FoodHeroes**