

CONTRIBUTIONS OF BIOTECH CROPS TO FOOD SECURITY, SUSTAINABILITY, AND CLIMATE CHANGE SOLUTIONS

INCREASE CROP PRODUCTIVITY



BIOTECH CROPS CONTRIBUTE TO FOOD, FEED, AND FIBER SECURITY

US\$384.9 BILLION

FARM INCOME GAINS IN 1996-2024 FROM PLANTING **BIOTECH CROPS**

REDUCED PRODUCTION COSTS



LESS PLOWING
LESS PESTICIDE SPRAYS
LESS LABOR

MORE AFFORDABLE FOOD



CONSERVE BIODIVERSITY



BIOTECHNOLOGY IS A **LAND-SAVING TECHNOLOGY** INCREASING YIELDS WITH LESS LAND

25.5 MILLION HECTARES

CONSERVED LAND IN 2024 DUE TO PRODUCTIVITY OF BIOTECH CROPS



**PREVENTS
DEFORESTATION**



**PROTECTS
BIODIVERSITY**

PROVIDE A BETTER ENVIRONMENT



IN 1996-2024, BIOTECH CROPS HELPED REDUCE PESTICIDE APPLICATION BY

867 MILLION KGS

DECREASED ENVIRONMENTAL IMPACT FROM HERBICIDE & INSECTICIDE USE BY **15.3%**

INSECT RESISTANT COTTON
LARGEST CHANGE IN PESTICIDE USE
SAVED 427 MILLION KG INSECTICIDES

REDUCE CO2 EMISSIONS



BIOTECH CROPS HELPED SAVE **67 BILLION KGS CO2**

REDUCED FUEL USE IN 1996-2024 EQUIVALENT TO REMOVING

256 MILLION CARS
OFF THE ROAD FOR 1 YEAR



REDUCED RELEASE OF **GREENHOUSE GASES** FROM GM CROPPING AREAS



HELP ALLEVIATE POVERTY AND HUNGER



BIOTECH CROPS UPLIFTED THE LIVES OF **17 MILLION FARMERS**

AND THEIR FAMILIES TOTALING **>65 MILLION PEOPLE**

SINCE 1996, BIOTECH CROPS HAVE PROVIDED FOOD, FEED, AND SHELTER TO THE WORLD'S **8.2 BILLION POPULATION**



BIOTECH CROPS HELP FARMERS **EARN REASONABLE INCOMES**

BETTER LIVELIHOODS FROM HIGHER YIELDS

IN 2024, BIOTECH CORN WAS PLANTED IN **18 COUNTRIES**, BENEFITTING SMALL, RESOURCE-POOR FARMERS

SOURCES:

Graham Brookes. 2026. Genetically Modified (GM) Crop Use 1996–2024: Farm Income and Production Impacts. *GM Crops & Food* 17(1). <https://doi.org/10.1080/21645698.2026.2726010>

ISAAA. 2024. Global Status of Commercialized Biotech/GM Crops in 2024. ISAAA Brief No. 57. ISAAA.



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