



10 REASONS WE NEED BIOTECH FOODS and CROPS



BIOTECH CROPS CAN HELP ADDRESS THE GLOBAL FOOD CRISIS

Biotechnology has helped farmers grow **311.8 million tons more food in the last 15 years.**

(source: www.croplife.org)



CROP BIOTECHNOLOGY HELPS SMALL FARMERS

90% of the 17 million farmers who grow biotech crops are resource-poor with **farms of less than 10 hectares.** The growth rate for biotech crops is at least three times as fast and five times as large in developing countries than industrialized countries. (source: ISAAA, *New York Times*)



BIOTECH CROPS SPUR GLOBAL ECONOMIC GROWTH

Economic benefits of GM crops amounts to an average of over \$130/hectare In the last 16 years, planted biotech crop acres have increased 100-fold from 1.7 million hectares to 170 million hectares. (source: ISAAA)



FARMING USING GM CROPS REDUCES CHEMICAL USE

Biotechnology saves the equivalent of 521,000 pounds of pesticides each year and helps cut herbicide runoff by 70 percent. (sources: ISAAA, PG Economics)



BIOTECH CROPS INCREASE YIELDS

Productivity in GM crops has delivered gains in some cases that are **7-20% higher than conventional varieties** (which are on average 33% higher than organic yields). (sources: Nature, PG Economics)



BIOTECH CROPS HELP INCREASE INCOME OF POORER FARMERS, REDUCING POVERTY AND MALNUTRITION

As the rate of Indian farmers adopting GM cotton has grown, calorie consumption linked to increased incomes has grown and undernourishment in families has dropped, translating into a **15-20 percent reduction in food insecurity** if all the non-Bt adopters in India alone take to this technology. (source: PLOS)



FARMING WITH BIOTECH CROPS IS SUSTAINABLE

GM crops in general need fewer field operations, such as tillage, which more residue to remain in the ground, sequestering more CO₂ in the soil and reducing greenhouse gas emissions. In 2011, **these practices were equivalent to removing 10.2 million cars from the road for one year.** (source: PG Economics)



FOODS TWEAKED BY BIOTECHNOLOGY ARE SAFE TO EAT

Over 25 years of independent research, **there is no documented evidence of harm to human health or deaths from consumption of GM foods** since they were introduced to the market. None. (sources: National Research Council, European Commission)



GENETICALLY MODIFIED FOODS IMPROVE NUTRITION AND HEALTH

The new generation of GM crops—Golden Rice, which delivers **vitamin A enhanced rice, high carotene mustard seed oil, Vitamin A enhanced cassava, enriched sweet potatoes and even edible vaccines**—are just a few innovations awaiting approval. (source: Plant Physiology, Journal of American College of Nutrition, Gates Foundation)



GM CROPS AND FOODS COMPLEMENT CONVENTIONAL AND ORGANIC FARMING

Independent scientists reject claims that GM crops or animals “contaminate” or anyway endanger our food supply or produce dangerous “Trojan genes.” (source: NPR, Nature, USDA)

