



BIOTECH COUNTRY FACTS & TRENDS

United States of America

The United States of America is the world's leader in commercial cultivation of biotech crops since 1996. In 2018, a total of 75 million hectares of biotech crops were planted in the country.

In 2018, the USA planted 75 million hectares of biotech crops, covering 39% of the global biotech area. The USA led 25 other industrial and developing countries that planted biotech crops in 2018. The USA planted the following biotech crops: maize, soybeans, cotton, canola, sugar beets, alfalfa, papaya, squash, apples and potatoes.

Of the 36.1 million hectares planted to maize in the country in 2018, 92% or 33.17 million hectares were biotech. This area is comprised of 721,000 hectares insect resistant (IR), 3.61 million hectares herbicide tolerant (HT), and 28.85 million hectares stacked IR/HT.

The total area planted to soybeans in the USA in 2018 was 36.26 million hectares, 94% of which is biotech HT soybeans, equivalent to 34.08 million hectares.

In 2018, alfalfa was planted in 8.5 million hectares in the USA, 15% of which is biotech, equivalent to 1.26 million hectares. The planted



area was composed of 1.14 million hectares herbicide tolerant and 120,000 hectares HarvXtra™. The area planted to HarvXtra™ increased 6-fold from 20,000 hectares in 2016—when it was first planted—to 120,000 hectares in 2018.

In 2018, biotech cotton was planted on 94% of the total cotton area in the USA equivalent to 5.1 million hectares. This area is comprised of 161,000

hectares IR; 484,000 hectares HT; and 4.4 million hectares stacked IR/HT.

Biotech canola area in the USA increased by 2.5% in 2018 when it was planted on 898,000 hectares from 876,000 hectares in 2017. Adoption rate of 100% was maintained since 2017.

The area planted to sugar beets in the USA in 2018 was 491,000 hectares,



which is 100% biotech herbicide tolerant sugar beets.

Small areas of biotech virus resistant squash (1,000 hectares) and PRSV resistant papaya in Hawaii (405 hectares) were grown in the USA in 2018.

In 2018, three non-browning Arctic® apple varieties, Golden Delicious, Granny, and Fuji were planted on 240 hectares, a 2.4-fold increase from 101 hectares in 2017.

A total of 1,700 hectares of Innate® potatoes comprised of 800 hectares of Generation 1 and 900 hectares of Generation 2 were planted in the USA in 2018.

COUNTRY SITUATIONER

The USA has been in the forefront of research, development, and commercialization of biotech crops since 1996.

Under President Donald J. Trump's administration, various initiatives have been put in place to expedite and make regulations transparent including the conscious effort of biotech food labeling.

Support to biotechnology products continued in the USA as the current President issued statement of support. During the American Farm

Bureau Federation's 2018 Annual Convention, President Donald Trump addressed 7,400 farmers and said, *"We are streamlining regulations that have blocked cutting-edge biotechnology, setting free our farmers to innovate, thrive, and to grow"* (Crop Biotech Update, January 16, 2018).

President Trump also decried the costs of excessive regulation, and touched on issues of particular importance to agriculturists such as regulations, labor, and trade (Crop Biotech Update, January 17, 2018).

The US Department of Agriculture (USDA) and US Food and Drug Administration (USFDA) are committed to modernize the Coordinated Framework for the Regulation of Biotechnology and the U.S. agricultural biotechnology regulatory system to develop efficient, science-based regulatory practices for products of biotechnology with assistance from other federal agencies, as part of the National Strategy for Modernizing the Regulatory Systems for Biotechnology Products (Crop Biotech Update, February 7, 2018).

US FDA also approved the biosafety of Golden Rice GR2E, a rice genetically engineered to produce provitamin A carotenoids. The agency concurs with the assessment of the International Rice Research Institute (IRRI), regarding the safety and nutrition of

Golden Rice. This is the third positive food safety evaluation of Golden Rice, after the approval granted by Food Standards Australia New Zealand (FSANZ) and Health Canada in February and March 2018 (Crop Biotech Update, May 30, 2018). In addition, USFDA approved Bt sugarcane from Brazil which produces raw and refined sugar not materially different in composition from raw and refined sugar from other sugarcane varieties (Crop Biotech Update, August 15, 2018).

BENEFITS FROM BIOTECH CROPS

In the 21 years of commercialization of biotech crops (1996-2016), the USA accrued the highest benefits at US\$80.3 billion and US\$7.3 billion for 2016 alone. The USA, one of the first six countries to commercialize biotech crops has been benefiting from the technology and is expected to retain its position with the most number of new biotech crops and traits being developed and commercialized.

SOURCE

ISAAA. 2018. Global Status of Commercialized Biotech/ GM Crops in 2018: Biotech Crop Continues to Help Meet the Challenges of Increased Population and Climate Change. *ISAAA Brief No. 54*. ISAAA: Ithaca, New York.

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