



BIOTECH COUNTRY FACTS & TRENDS

Brazil

Brazil is the second largest grower of biotech crops in the world, next to the US, planting 42.2 million hectares of biotech crops in 2014.

In 2014, the total biotech crop hectares in Brazil comprised: 29.1 million hectares of biotech soybean, 12.5 million hectares of biotech maize, and 0.6 million hectares of biotech cotton.

Of the 47.3 million hectares total area planted to soybean, maize, and cotton in Brazil in 2014, 89.2%, or 42.2 was biotech.

Biotech soybean was planted in 29.1 million hectares, up from 26.9 million hectares in 2013, equivalent to 7.9% growth, and 93.2% adoption rate.

Biotech maize remained the second important crop with a total of 12.5 million hectares for both summer (4.8 million hectares) and winter (7.7 million hectares), a decrease of ~2.9% from 2013 due to a reduction in total maize area planted.

Biotech cotton was planted in 0.6 million hectares in 2014, an increase of 25.1% over 2013, and 65.1% adoption rate.



In 2011, Brazil approved a biotech bean that can resist golden bean mosaic virus. It is now completing variety registration trials and expected to be commercialized in early 2016.

The economic benefit to Brazil from biotech crops for the 10-year period (2003-2013) is US\$11.8 billion and US\$3.4 billion for 2013 alone (Brookes and Barfoot, 2015).

BIOTECH CROP ADOPTION

The total grain production in Brazil reached 203.3 million tons in 2014, an increase of 3.1% compared to the 2013/14 crop season. For the 10-year period 2005/06 to 2014/15, grain production increased by 5% per year.

COUNTRY PROFILE

Population: 196.7 million

GDP: US\$2,477 billion

GDP per Capita: US\$12,590

Agriculture as % GDP: 5%

Agricultural GDP: US\$123.8 billion

% employed in agriculture: 17%

Arable Land (AL): 70.6 million hectares

Ratio of AL/Population*: 1.7

Major crops:

- Sugarcane
- Soybean
- Maize
- Cassava
- Oranges

Commercialized Biotech Crops:

- IR/HT Soybean
- Bt Cotton
- Bt Maize

Total biotech crop area and (%) increase in 2014:
42.2 Million Hectares (+5%)

Increased farm income, 2003-2013: US\$11.8 billion

*Ratio: % global arable land / % global population



Biotech soybean occupied 93.2% of the 31.2 million total soybean hectareage in Brazil in 2014. The highest adoption rate, by region, was in the South region with 94.7% followed by the Southeast at 94.3% and Midwest at 94.2%.

Of the 6.64 million hectares of summer maize, 72.6% is biotech, of which 54% is IR/HT, 15.7% is IR, and 3% is HT alone. The highest adoption, by region, was in the Southeast at 90.2%, followed by the South at 89.9%, and Midwest at 89.7%.

Winter maize (also referred to as “second season crop”) occupied a bigger hectareage than summer maize at 8.5 million hectares, of which 90%, or 7.7 million hectares is biotech. 44.7% of biotech winter maize is IR/HT, 40.5% is IR, and 4.8% is HT alone. The highest adoption by region is in the South at 95.6%, followed by the Midwest at 91.7%, and Southeast at 86.7%.

Of the 0.9 million hectares of biotech cotton planted in Brazil in 2014, 65.5%, or 0.6 million hectares is biotech, of which 31.2% is IR, 23.6% is HT, and 10.3% is IR/HT. The highest adoption by region was in the Midwest at 67.6%, followed by the Southeast at 65.2%, and Northeast with 61.4%.

BIOTECH CROP APPROVAL

The technical commission responsible for biosafety in Brazil, CTNBio (Brazilian National

Technical Commission on Biosafety), is regarded as one of the most effective commissions worldwide, with a clear federal biotech regulatory framework and functional approval processes.

In the previous years, the number of approvals per year was high, but approvals for 2013 and 2014 have been low. To date, Brazil has approved a total of 37 events for planting, which includes 5 traits for soybeans, 19 for maize, 12 for cotton and 1 for an edible virus resistant bean.

Approvals by the Ministry of Agriculture (MAPA/SNRC) from 2004 to October 2014 include 959 new soybean varieties, of which 752 were genetically modified (78%) and only 207 (22%) were conventional varieties.

The deployment of biotech maize in Brazil is in its seventh year. CTNBio has approved and registered 1,251 maize hybrids, of which 715 (57%) are biotech hybrids.

Since 2004, Brazil has registered 97 new cotton varieties, of which 48 were biotech.

FUTURE PROSPECTS

Brazil remains the principal exporter of biotech soybeans to China, and is also developing an export market for biotech maize.

Brazil is developing other biotech crops, such as biotech insect

resistant sugarcane for sugar and ethanol production. Other biotech crops in the pipeline being developed include biotech eucalyptus, rice, wheat, and citrus.

The successful initiative to develop resistance to BGMV in Brazil can serve as a practical model for other developing countries engaged in the development of biotech crops. This applies to both the scientific development of the product, and importantly the timely regulatory approval of the biotech bean so that producers, consumers and the country derive maximum benefits from the investment and the technology.

SOURCES

- James, Clive. 2014. Global Status of Commercialized Biotech/GM Crops: 2014. *ISAAA Brief No. 49*. ISAAA: Ithaca, New York.
- Food and Agriculture Organization of the United Nations. <http://www.fao.org/countryprofiles/>
- The World Bank. <http://www.worldbank.org/>

For more information, contact:

ISAAA SEAsiaCenter
GS Khush Hall, IRRI
Los Baños, Laguna 4031 Philippines
Telefax: +63 49 5367216
Email: knowledge.center@isaaa.org

www.isaaa.org



BIOTECH COUNTRY FACTS & TRENDS

Argentina

Argentina maintained its ranking as the third largest producer of biotech crops in the world in 2014, occupying 13% of 181.5 million hectares of global biotech crop hectareage.

A total of 24.3 million hectares were planted in Argentina in 2014, practically the same as the 2013 area at 24.4 million hectares. Of the 24.3 million hectares, 20.8 million hectares were biotech soybean, 3 million hectares were biotech maize, and 0.5 million hectares were biotech cotton.

The 20.8 million hectares of biotech soybean is equivalent to 100% adoption in Argentina in 2014.

Of the total maize hectareage of 3.75 million hectares in Argentina in 2014, 80%, or 3 million hectares were biotech, composed of 1.98 million hectares Bt/HT, 780,000 hectares Bt, and 240,000 hectares HT.

Biotech cotton hectareage in Argentina increased to 530,000 hectares in 2014, a 100% adoption composed of 457,000 hectares Bt/HT, 45,000 hectares HT, and 28,000 hectares Bt.

Argentina's benefits from biotech crops from 1996 to 2013 is estimated at US\$17.5 billion, and the benefits for 2013 alone is estimated at US\$1.9 billion.

BIOTECH CROP ADOPTION

There are 37 biotech crop products approved for commercial planting in Argentina from 1996 to 2014: 29 maize events, 5 soybean, and 3 cotton events. Seven maize events were approved in 2014.

The 20.8 million hectares of biotech soybean is equivalent to 100% of national soybean crop. The increase in soybean plantings in 2014 over 2013 is mainly due to farmers planting significantly more soybean and less maize.



COUNTRY PROFILE

Population: 40.8 million
GDP: US\$1,842 billion
GDP per Capita: US\$10,940

Agriculture as % GDP: 11%
Agricultural GDP: US\$163 billion
% employed in agriculture: 1%

Arable Land (AL): 38 million hectares
Ratio of AL/Population*: 3.3

Major crops:

- Soybean
- Maize
- Sugarcane
- Wheat
- Sunflower seed

Commercialized Biotech Crops:

- HT Soybean
- Bt/HT Cotton
- Bt/HT/Bt-HT Maize

Total biotech crop area and (%) increase in 2014:
24.3 Million Hectares (-0.4%)

Increased farm income, 1996-2013: US\$17.5 billion

*Ratio: % global arable land / % global population

BENEFITS FROM BIOTECH CROPS IN ARGENTINA

Benefits from biotech crops alone for the first 15 years (1996-2010) were estimated at US\$72.36 billion and the creation of 1.82 million jobs.

Economic Benefits by Crops

From glyphosate-tolerant soybean, benefits of US\$65,153 million is broken down into US\$3,231 million from reduction in production costs and US\$61,917 million due to the expansion of the planted area; distributed to farmers 72.3%, 21.3% to the National Government and 6.5% to technology providers (seeds and herbicides).

Insect resistance and herbicide tolerance technologies gave benefits of US\$5,375 million, distributed as: 68.2% to growers, 11.4% to the National Government, and 20.4% to technology providers (mainly seeds).

Total benefits from insect-resistant and herbicide-tolerant cotton, reached US\$1,834 million that went mainly to farmers (96%), with only 4% going to technology providers (seeds and herbicides).

More Benefits

Reduction in global price. The total benefit for 1996-2012 was estimated at about US\$89 billion. If this adoption process had not occurred, the international price of soybean in 2011 would have been 14% higher than it actually was.

Future Biotech Crops

The potential benefits estimate that could be generated by a stacked herbicide tolerant and insect resistant soybean and a drought-resistant wheat, under three different price and adoption scenarios, from the next growing season, in the following 10 years could be US\$9,131 million to US\$26,073 million for soybean and US\$526 million to US\$1,923 million for wheat.



FUTURE PROSPECTS

The stacked gene Bt/HT maize occupied about ~66% of the total biotech maize area, and is expected to retain this premier position as there is positive trade discussions to export Argentinean biotech maize to China.

Argentina has achieved a marked improvement in its promotion of biotech crops and has pursued their timely regulation aggressively. National Advisory Committee on Ag Biotech (CONABIA) now has an impressive stable of products for evaluation from both the public and private sector.

Argentina's Agriculture Ministry launched a comprehensive regulatory framework for the assessment and approval of biotech crops in March 23, 2013. This ends the multi-year regulatory streamlining process and it is expected to boost the process of evaluating the risks and benefits of adopting new biotech crops in Argentina.

Argentinian scientists have developed a drought tolerant biotech sugarcane and are exploring cooperation to further develop this product with Brazil. The product from this joint program could be approved for production by 2017 and would allow Argentina to increase sugarcane hectareage from the current 350,000 hectares to 5 million hectares in the future.

Argentinian scientists have transferred a drought tolerant gene from sunflower to maize, soybean and wheat. BioCeres, an Argentinian company, has been granted a license for this gene and has a joint venture named Verdeca, with Arcadia Biosciences from the US. Field trials with the new seeds have increased yield by 15% or more.

CONABIA is currently evaluating biotech potatoes resistant to viruses Y and PLRV (which cause significant losses in Argentina), as well as herbicide tolerance.

SOURCES

James, Clive. 2014. Global Status of Commercialized Biotech/GM Crops: 2014. *ISAAA Brief No. 49*. ISAAA: Ithaca, New York.
Food and Agriculture Organization of the United Nations.
<http://www.fao.org/countryprofiles/>
The World Bank.
<http://www.worldbank.org/>

For more information, contact:

ISAAA SEAsiaCenter
GS Khush Hall, IRRI
Los Baños, Laguna 4031 Philippines
Telefax: +63 49 5367216
Email: knowledge.center@isaaa.org

www.isaaa.org



BIOTECH COUNTRY FACTS & TRENDS

India

In 2014, India became the top cotton producing country in the world, planting more than China and the US.

India has the world's largest hectareage of cotton, and accounts for 46% of the total biotech cotton area planted globally. In the 13-year period 2002 to 2014, India has tripled cotton production from 13 million bales to 40 million bales.



In 2014, Bt cotton was planted in 11.6 million hectares in India, 600,000 more than the 11 million hectares planted in 2013.

The 11.6 million hectares Bt cotton is 95% of the total 12.25 million hectares of cotton in India.

A total of 7.7 million farmers farming on average ~1.5 hectares planted 600,000 hectares more Bt cotton than 2013.

A cumulative 54 million small farmers in India have benefited from planting Bt cotton repeatedly year-after-year during the 13-year period 2002 to 2014.

Commercialization of Bt cotton increased 230-fold at 11.6 million hectares in 2014 from 50,000 hectares in 2002.

India doubled its market share of global cotton production from 12% in 2002 to 25% in 2014, representing a quarter of the total global cotton production.

India was estimated to have enhanced farm income from Bt cotton by US\$16.7 billion in the 12-year period 2002 to 2013, and US\$2.1 billion in 2013 alone.

BIOTECH CROP APPROVAL

In 2014, the Genetic Engineering Appraisal Committee (GEAC) of the Ministry of Environment and Forest (MOEF) released an additional 70 Bt cotton hybrids for a total of around 1,167 Bt cotton hybrids to farmers across 10 cotton growing states in India.

COUNTRY PROFILE

Population: 1,241.5 million

GDP: US\$1,873 billion

GDP per Capita: US\$1,510

Agriculture as % GDP: 18%

Agricultural GDP: US\$337.1 billion

% employed in agriculture: 51%

Arable Land (AL): 174.2 million hectares

Ratio of AL/Population*: 0.65

Major crops:

- Sugarcane
- Wheat
- Potato
- Rice, paddy
- Vegetables, fresh
- Cotton

Commercialized Biotech Crop: Bt Cotton

Total biotech crop area and (%) increase in 2014:

11.6 Million Hectares (+5%)

Increased farm income, 2002-2013: **US\$16.7 billion**

*Ratio: % global arable land / % global population



The GEAC deregulated 6 events of Bt cotton incorporating single and double genes belonging to public and private sector institutions between 2002 to 2014.

Out of the 6 approved events, 4 events were backcrossed with a large number of superior cotton genotypes and released for commercial plantings from 2002 to 2014.

The significant increase in area under hybrid cotton cultivation in India is due to the introduction of Bt technology which spurred hybridization of cotton from 3 hybrids in 2002 to 1,167 in 2014.

In 2014, the GEAC resumed regular meetings, and approved the field trials of GM mustard, Bt chickpea, NUE rice, and Bt brinjal.

BENEFITS FROM BT COTTON

Aside from boosting cotton production in India in the last 13 years, Bt cotton has made a substantial contribution to cutting the production cost due to reduced insecticide applications. Farmers lessened spraying insecticides from 24 sprays to only 2-3 sprays per season.

A steep decline in insecticide usage particularly on *Helicoverpa armigera* was observed from 71% in 2001 to 3% in 2011. The percentage of cotton insecticides to the total pesticides market in India

registered a steep decline from 33% in 2001 to 11% in 2011 at a time when total pesticides market in the country increased significantly during the same period.

Savings in insecticides between 2004 and 2014 coincided with the large scale adoption of Bt cotton from half a million hectares in 2004 to 11.6 million hectares in 2014-15, equivalent to 95% of the total cotton crop in 2014-15.

Bt cotton ensured the sustained supply of raw cotton to meet the growing demand of the domestic textile industry, which earned US\$39 billion from export of textile in 2013-14 (PIB, 2014). Bt cotton transformed India from a net importer to a net exporter of cotton. India's cotton export registered a sharp increase from 0.05 million bales in 2001-02 to 11.4 million bales in 2013-14 (CAB, 2014).

India is the world's largest cotton exporting country with recorded cotton export ranging between 8 to 12 million bales over last few years (PIB, 2013).

FUTURE PROSPECTS

Five new cotton events are under biosafety assessment, contained field trial and open field testing for new and stacked traits which will be considered for commercial approval in India between 2013 and 2015. Other traits include

drought and salinity tolerance, disease resistance, sucking insect resistance, leaf curl virus resistance and other traits related to cotton fiber quality.

Timely approval and deployment of these new biotech cotton traits will provide the technological continuity necessary for developing increasingly improved biotech cotton and generate the momentum for growth. This will ensure prosperity for small cotton farmers in India with the expectation that the country will achieve a national production of 40 million bales by 2015 and a target of 100 million bales by 2030.

SOURCES

- James, Clive. 2014. Global Status of Commercialized Biotech/GM Crops: 2014. *ISAAA Brief No. 49*. ISAAA: Ithaca, New York.
- Food and Agriculture Organization of the United Nations. <http://www.fao.org/countryprofiles/>
- The World Bank. <http://www.worldbank.org/>

For more information, contact:

ISAAA SEAsiaCenter
GS Khush Hall, IRRI
Los Baños, Laguna 4031 Philippines
Telefax: +63 49 5367216
Email: knowledge.center@isaaa.org

www.isaaa.org



BIOTECH COUNTRY FACTS & TRENDS

China

In 2014, China grew 3.9 million hectares of biotech crops: ~3.9 million hectares of Bt cotton, ~8,000 hectares of virus resistant papaya, and ~543 hectares of Bt poplar.

Bt cotton was planted by an estimated 7.1 million small, resource-poor farmers in China.

The total biotech cotton plantings in China in 2014 were estimated at ~3.9 million hectares, which is ~93% of its total national cotton area.

The adoption rate of Bt cotton in China was estimated at 93% in 2014, compared to 90% in 2013.

Virus-resistant biotech papaya plantings increased by ~50% from 5,800 hectares in 2013 to ~8,000 hectares in 2014. Papaya growing regions Guangdong province and Hunan Island were joined by Guangxi province in 2014.

Bt poplar has been planted in China since 2003. By 2014, 543 hectares of poplar has been planted.

The economic benefit to China from biotech cotton for the period 1997 to 2013 is US\$16.2 billion and US\$1.6 billion for 2013 alone.

BT COTTON

China belongs to the “six founder biotech crop countries” having first commercialized Bt cotton in 1996, the first year of global commercial planting of biotech crops.

China increased their income by approximately US\$220 per hectare (equivalent to approximately US\$1 billion nationally) due, on average, to a 10% increase in yield, and a 60% reduction in insecticides, both of which contribute to a more sustainable agriculture and the prosperity of small, resource-poor farmers.

VIRUS RESISTANT PAPAYA

In September 2006, China’s National Biosafety Committee recommended

for commercialization a locally developed biotech papaya resistant to papaya ring spot virus (PRSV). The technology features the viral replicase gene and was developed by South China Agricultural University; the biotech papaya is highly resistant to all the local strains of PRSV.

In Guangdong province, the main province for papaya production in China, 95% of the 4,500 hectares of papaya is now biotech, equivalent to 4,275 hectares.

Hainan Island planted biotech papaya for the first time in 2012, and in 2014, 60% of the 4,000 hectares of papaya grown in the area was biotech.

Guangxi province planted their first biotech papaya in 2014 with

COUNTRY PROFILE

Population: 1,347.6 million

GDP: US\$7,319 billion

GDP per Capita: US\$5,450

Agriculture as % GDP: 10%

Agricultural GDP: US\$731.9 billion

% employed in agriculture: 40%

Arable Land: 113.8 million hectares

Ratio of AL/Population*: 0.4

Major crops:

- Rice, paddy
- Sweet potato
- Cotton
- Sugarcane
- Maize
- Vegetables, fresh

Commercialized Biotech Crops:

- Bt Cotton
- PRSV Papaya
- DR, VR Tomato
- Bt Poplar
- VR Sweet Pepper

Total biotech crop area and (%) increase in 2014:
3.9 Million Hectares (-7%)

Increased farm income, 1997-2013: US\$16.2 billion

*Ratio: % global arable land / % global population



an initial 90% adoption of the 2,000 hectares of papaya in the province.

Thus, a total of 8,475 hectares of biotech papaya was planted in China in 2014, a 46% increase from 5,800 hectares in 2013.

INSECT RESISTANT POPLAR

The first Bt poplars were developed and commercialized in 2003 by the Research Institute of Forestry in Beijing, Chinese Academy of Forestry to meet China's need for timber which by 2015 is estimated at 330-340 million cubic meters of timber.

Under rigorous performance testing, two Bt poplar clones have exhibited a high level of resistance to leaf pests, resulting in a substantial 90% reduction in leaf damage. The two clones were first commercialized in 2003 in Northern China, and by 2014, 543 hectares were planted in China.

BIOTECH CROPS BENEFITS

A study led by KM Wu in 2008 suggested that the potential number of small farmers actually benefiting indirectly from Bt cotton in China might be 10 million more, which was confirmed by a separate study led by WD Hutchinson in 2010. The research estimated that the 10 million beneficiary farmers are those cultivating 22 million hectares of crops other than cotton, which also host cotton bollworm, but where infestations have decreased to up to 10-fold,

because of lower infestations in Bt cotton. Thus, the actual number of beneficiary farmers of biotech Bt cotton in China may well exceed 17.5 million.

Biotech phytase maize and Bt rice approved for biosafety on 27 November 2009, are undergoing extensive and rigorous field trials. The biosafety certificates are up for renewal in 2015.

A study on the adoption and uptake pathways of Bt cotton by small-scale farmers in China and the changes these have brought to farmers' lives was conducted by the Center for Chinese Agricultural Policy. The study was conducted in the provinces of Hebei, Shandong, Anhui and Henan provinces where Bt cotton is widely cultivated, also referred to as China's Huang-Huai-Hai cotton production zone.

The adoption rate of Bt cotton is highest in Hebei province at 100%.

The most promising benefit that the farmers derived from Bt cotton adoption is the reduction of pesticide use, which was evident in all of the four provinces. In Hebei, the farmers now spray pesticide only 4 times compared to more than 25 times before adopting Bt cotton. Majority of farmers also reported that planting Bt cotton enabled them to use less labor input, but higher yield with good cotton quality. This reduced their farming cost compared to the conventional cotton. In terms of income, farmers receive net revenue for Bt cotton three times

more (31.9 yuan/ha) than what they get from non Bt cotton (9.7 yuan/ha). The difference of total cost between Bt cotton and non Bt cotton production is 5,028.6 yuan/ha.

FUTURE PROSPECTS

Origin Biotechnology, a subsidiary of Origin Agritech Ltd., has reached a comprehensive, worldwide agreement with the Institute of Plant Protection, Chinese Academy of Agricultural Sciences (CAAS) for the exclusive rights of the Bt gene developed by CAAS. Origin Biotechnology has the rights to this genetic trait in China, and has been passing this product through the Ministry of Agriculture regulatory trials.

Scientists at Hainan University and Hunan Provincial Academy of Agricultural Sciences are developing a high yielding salt tolerant rice variety. The initial results showed that the biotech rice could produce 6 tonnes per hectare. The harvest in October 2013 also showed one variety has similar output as those varieties grown in normal farmlands.

SOURCES

- James, Clive. 2014. Global Status of Commercialized Biotech/GM Crops: 2014. *ISAAA Brief No. 49*. ISAAA: Ithaca, New York.
- Food and Agriculture Organization of the United Nations.
<http://www.fao.org/countryprofiles/>
- The World Bank.
<http://www.worldbank.org/>

For more information, contact:

ISAAA SEAsiaCenter
GS Khush Hall, IRRI
Los Baños, Laguna 4031 Philippines
Telefax: +63 49 5367216
Email: knowledge.center@isaaa.org

www.isaaa.org



BIOTECH COUNTRY FACTS & TRENDS

Paraguay

Paraguay, the world's number four exporter of soybean, has successfully grown biotech soybean since 2004. In 2014, 95% of the total national soybean hectareage is biotech.

In 2014, Paraguay planted 3.9 million hectares of biotech soybean, maize, and cotton, an 8% increase over the 2013 area of 3.6 million hectares.

Of the 3.9 million hectares of biotech crops planted in Paraguay in 2014, 3.3 million hectares were biotech soybean, 500,000 hectares were biotech maize, and ~36,000 hectares were biotech cotton.

Of the total national soybean hectareage of 3.4 million hectares in Paraguay in 2014, 95% or 3.3 million hectares were biotech, including up to ~170,000 of stacked Bt/HT product.

Economic gains over the period 2004 to 2013 were estimated at US\$924 million and the benefits for 2013 alone at US\$96 million.

BIOTECH CROP APPROVALS AND ADOPTION

Three biotech maize events and one biotech soybean were officially approved in 2014 in Paraguay. These are biotech maize events NK603, MIR 162, and MON 89034 x 88017, and biotech soybean CV127.

In 2014, Paraguay planted a total of 1.0 million hectares of maize of which 50% was biotech. Bt cotton, which was approved for commercial production in the country in October 2011, was planted in 80% of the total cotton area of 45,000 hectares.

Intacta, a new stacked HT/IT soybean was approved in 2013 and grown on ~170,000 hectares in 2014.

SOURCES

James, Clive. 2014. Global Status of Commercialized Biotech/GM Crops: 2014. *ISAAA Brief No. 49*. ISAAA: Ithaca, New York.
Food and Agriculture Organization of the United Nations.
<http://www.fao.org/countryprofiles/>
The World Bank.
<http://www.worldbank.org/>

For more information, contact:

ISAAA SEAsiaCenter
GS Khush Hall, IRRI
Los Baños, Laguna 4031 Philippines
Telefax: +63 49 5367216
Email: knowledge.center@isaaa.org

www.isaaa.org

COUNTRY PROFILE

Population: 6.6 million
GDP: US\$23.8 billion
GDP per Capita: US\$5,500
Agriculture as % GDP: 23.5%
Agricultural GDP: US\$5.6 billion
% employed in agriculture: 26.5%
Arable Land (AL): 4.1 million hectares
Ratio of AL/Population*: 3.0

Major crops:

- Cassava
- Soybean
- Sugarcane
- Maize
- Wheat

Commercialized Biotech Crops:

- HT Soybean
- Bt/HT Maize
- Bt/HT Cotton

Total biotech crop area and (%) increase in 2014:
3.9 Million Hectares (+8%)

Increased farm income, 2004-2013: US\$0.92 billion

*Ratio: % global arable land / % global population