

## In 2010

- The biotech crop hectareage in the country continued to increase for the 13th consecutive season, with 2.2 million hectares planted, compared with 2.1 million hectares in 2009.
- The total maize area decreased by 10% mainly due to carry-over of grain stocks and lower grain prices, while soybean plantings increased.
- Approximately 10 million hectares of biotech maize (white and yellow) were planted in the 10 year period 2001 to 2010.
- The total area planted to soybeans increased from 270,000 hectares in 2009 to 390,000 hectares in 2010 due to higher demand, while the adoption rate of herbicide tolerant soybeans remained at 85% (332,000 hectares).
- The total cotton area doubled to 15,000 hectares, due to the high cotton prices, with the biotech adoption rate reaching 100%, 95% of which are stacked.
- The GMO Act of 1997, amended in 2006 was amended in 2010 to meet requirements under the Cartagena Protocol on Biosafety (CPB).

## Biotech Adoption in South Africa

### Maize

- Of the total maize area of 2.47 million, 76.9% or 1.9 million hectares were biotech, slightly down from 78% in 2009 due to lowered market price for maize.
- Of this 1.9 million hectares of biotech maize, 45.6% or 865,589 hectares were the single Bt gene, 13.4% or 254,211 hectares herbicide tolerant, and 41% or 777,820 hectares stacked Bt and herbicide tolerant (HT) traits.
- White maize was planted in 1.52 million hectares, 74.8% or 1.14 million hectares were biotech with single Bt gene at 571,280 hectares (50.2%), herbicide tolerance traits at 97,040 hectares (8.5%) and Bt-herbicide tolerance stacks at 470,430 hectares (41.3%).
- The yellow maize planting of 946,000 hectares comprised 80.2% or 758,870 hectares of biotech, up from the 77.1% of the previous season, with 38.8% or 294,309



Population: **48.8 million**  
 GDP: **US\$276 billion**  
 GDP per Capita: **US\$5,680**  
 Agriculture as % GDP: **3.0%**  
 Agricultural GDP: **US\$8.3 billion**  
 % employed in agriculture: **8%**  
 Arable Land (AL): **14.7 million hectares**  
 Ratio of AL/Population\*: **1.3**

\*Ratio: % global arable land / % global population

#### Major crops:

- Sugarcane
- Maize
- Wheat
- Grapes
- Potato

#### Commercialized Biotech Crops:

- HT/Bt/HT-Bt Cotton
- Wheat
- HT/Bt/HT-Bt Maize

Total area under biotech crops and (%) increase in 2010:

**2.4 Million Hectares (+5%)**

Farm income gain from biotech, 1998-2009: **US\$676 million**

hectares for the single Bt trait, 20.7% or 157,171 hectares for herbicide tolerance, and 40.5% (up from 28% in 2009/10) or 307,390 hectares for the stacked Bt and herbicide tolerant product.

- Smallholder and peasant farmers planted some 19,000 hectares of biotech maize in 2009; 52% were Bt, 23% herbicide tolerant, and 25% Bt/HT stacked.

## Soybean

- Soybean was planted in 390,000 hectares, 24% more than 2009.
- HT soybean was planted in 331,500 hectares or 85% of the total area planted.
- Of the 66 soybean varieties listed for 2010, 18 or 27% were biotech. Roundup Ready (RR) herbicide tolerance is being replaced with RRFlex herbicide tolerance trait.



## Cotton

- Around 15,000 hectares was planted to cotton in 2010.
- All of the cotton planted was biotech with 95% stacked (Bt/HT) and 5% RR used in refugia.
- The stacked BtRR (Bollgard®II RR) will be entirely replaced with BtRRFlex by 2011.

## Approval of Biotech Crops

- MON 89034 and MON89034 x NK603 were approved for commercial release in 2010.
- The field trial approvals for 2010 were: 5 single events and 7 stacked traits of maize; 1 single event and 5 stacked traits of cotton; 1 biofortified sorghum event; 1 fungal resistant table grape; 4 sugarcane events with improved traits, and one cassava with altered starch.
- Ornithogalum (indigenous bulb flower) with virus resistance was approved for greenhouse trial.

## Economic Benefits

- Economic gains from biotech crops for South Africa for the period 1998 to 2009 was US\$676 million and US\$142 million for 2009 alone (Brookes and Barfoot, 2011).

### Excerpts from:

James, Clive. 2010. Global Status of Commercialized Biotech/ GM Crops: 2010. *ISAAA Brief* No. 42. ISAAA: Ithaca, New York.

### Other Sources:

The World Bank. <http://www.worldbank.org/>  
Food and Agriculture Organization of the United Nations.  
<http://www.fao.org/countryprofiles/>

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