In 2016, the area planted to biotech maize in the Philippines increased to 812,000 hectares from 702,000 hectares in 2015 due to favorable weather conditions in the country.

The adoption rate of biotech maize in 2016 increased to 65%.

The area occupied in 2016 by the stacked traits Bt/HT maize is 679,000 hectares or 84% of the total area planted for biotech maize; and 16% for herbicide tolerant maize at 133,000 hectares.

The number of small resource-poor farmers, growing on average 2 hectares of biotech maize in the Philippines in 2016 was estimated at 406,000.

**BIOTECH CROP ADOPTION**

Biotech maize is the only biotech crop commercialized in the Philippines. The total hectarage planted to the single trait Bt maize decreased by 76% in 2012, with no single trait Bt maize being planted since 2013.

On a percentage basis, biotech yellow maize has consistently increased by about 5% of the total yellow maize hectarage every single year from the first year of commercialization in 2003, reaching 63% in 2015, and highest at 65% in 2016.

A total of 13 biotech maize events have been approved for commercial planting in the Philippines since 2002: 3 single Bt, 4 single HT, 2-two Bt genes stacked, and 4 Bt/HT stacked trait. In addition, a total of 88 biotech crops and products are currently approved for direct use as food, feed and for processing in the Philippines that include alfalfa, canola, cotton, maize, potato, rice, soybean, and sugar beet.

**FUTURE PROSPECTS**

New biotech crop products are being developed by national and international institutions in the Philippines.

Golden Rice is a beta carotene-fortified rice being developed by the Philippine Rice Research Institute (PhilRice) and the International Rice Research Institute (IRRI).
Confined field testing (CFT) was conducted at IRRI in 2015, and selected lines of the new event were tested in CFT on four sites across the Philippines. Data for compositional, biosafety and expression analyses were obtained in some selected sites, as well as for agronomic traits. Data generated from these CFTs will be used to obtain multi location trial permits and in preparing for food, feed, and processing approval applications.

The fruit and shoot borer resistant Bt eggplant project led by the Institute of Plant Breeding of the University of the Philippines at Los Baños (IPB-UPLB), was also a royalty-free technology donated by the Maharashtra Hybrid Seed Company (Mahyco) through a sublicense agreement. The proponents already completed field trials of promising hybrid varieties in the approved multi-location trial sites in Luzon and Mindanao in 2012.

Biotech papaya with delayed ripening and papaya ring spot virus (PRSV) resistance, by IPB-UPLB, has already been tested in confined field trials in 2012. Another field trial will be conducted in a larger area pending release of regulatory approvals.

Bt cotton is being developed by the Philippine Fiber Development Administration (PFIDA, formerly the Cotton Development Authority). The technology, provided by Nath Biogene Ltd. and the Global Transgene Ltd. from India was tested for the first time in a confined field trial in 2010, started multi location field trials in 2012, and in 2013, data to complete regulatory dossiers are being collected in 2015 for commercialization purposes.


According to local experts, the JDC provides more consideration to socio-economic issues and environmental impacts in risk assessment procedures compared to DA-AO 8 which was nullified in 2015.

**Benefits from Biotech Crops in the Philippines**

The benefits of biotech maize to Filipino farmers’ livelihood, income, the environment and health have been well studied and documented. Farms planted with Bt maize in the Northern Philippine provinces have significantly higher populations of beneficial insects such as flower bugs, beetles, and spiders than those planted with conventional hybrid maize (Javier et al. 2004). The farm level economic benefit of planting biotech maize in the Philippines in the period 2003 to 2015 is estimated to have reached US$642 million. For 2015 alone, the net national impact of biotech maize on farm income was estimated at US$82 million.

**Source**


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