

Are we building a sustainable tomorrow?

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Earth Day is today and we at *BioSpectrum* want to join the rest of the world in celebrating and promoting the continued health of the planet and our fellow beings. This day offers us an opportunity to reflect on the Earth's condition and renew our association with the life sustainer as members of her family.

From plants to humans, life is a food web and in a country like India where 70 percent of its economy is dependent on agriculture, it is important to understand the country's biotechnological advancements in the field and how it has contributed to the well-being of the planet and its people.

For the past 15 years, the Indian agriculture department and public researchers have been pumping in huge investments in to genetic engineering of crops to make agriculture more sustainable and feed the growing population.

The use of Bt-cotton in India has grown exponentially since its introduction more than a decade ago. India has recently became the number one exporter of cotton and the second largest producer of cotton in the world. Indian cotton seeds are used in many developing countries in South Asia.

The country's private sector has generated affordable technologies for smart crop improvement, thereby providing affordable seeds not only to India but also to other developing countries.

Several Indian public sector research organizations, indigenous industry players and joint ventures have developed a number of biotechnology derived seeds that can bring enormous advantage to Indian agriculture, specifically to small and marginal farmers and consumers.

Farmers have found that the use of genetic engineering in agriculture helps in getting rid of weeds, improving soil health and water retention, reducing pesticide runoff, and greenhouse gas emissions. Biotechnology also helps in promoting energy security through biofuels and this helps in keeping the environment clean and eco-friendly.

However, over the past five years, India has also become the center of anti-GM movement, threatening the advancement of biotech-led agriculture in the country. "Genetic engineering could be a threat to human and environmental health," Greenpeace International, an NGO mentions on its website.

Biotech experts in the country opine that escalating protests over the last five years have turned the Indian clock in agriculture research, back by more than a decade. Researchers still await the approval of the Biotech Regulatory Authority of India Bill (BRAI) which lapsed in 2014. The BRAI bill if approved could have been a one-window approach for regulation of genetic engineering and biotechnology products.

"The world needs biotechnology," said Mr Jon Entine, a journalist and founder of the Genetic Literacy Project, "And it will need it even more in 2050, when the population is projected to reach 9 billion." As the World celebrates Earth Day 2015, Indian agricultural researchers are still clueless about the fate of agri-biotech in the country.