Since 1984, our global focus on plant biotechnology R&D has been centered in Research Triangle Park, N.C. Over the years, Syngenta experts have leveraged innovations in biotechnology to develop novel traits to help farmers grow more with limited land and resources. Through world-class science, global reach and commitment to our customers, we are working to increase crop productivity, protect the environment and improve health and quality of life by bringing plant potential to life.

Seed Product Innovation at Syngenta
A History of Innovative Research & Development

www.syngenta.com

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Syngenta is formed by merging the agribusinesses of Novartis and AstraZeneca. Syngenta, which means “bringing people together,” becomes a world-leading agribusiness committed to sustainable agriculture through innovative research and technology.

**1995**
U.S. regulatory agencies deregulate Bt176, widely known as Bioworks, the first genetically engineered corn seed product ever to be sold to and planted by U.S. corn growers. Ciba-Geigy scientists developed the Cry1Ab gene used in Bt176, conferring resistance to the European corn borer, a major corn pest. It is identified as a bacterial strain and confirmed its genetic identity at the Pasteuria Bioscience Inc. to complement Syngenta’s existing chemical nematocides. Syngenta buys DevGea, a global leader in hybrid rice and RNAi technology.

**2000**
Syngenta is one of the first of two groups to sequence the rice genome. Syngenta researchers use this data to develop Golden Rice and a comprehensive marker map for corn.

**2002**
Syngenta scientists submit MR162 for regulatory approvals. MR162, a unique insect control event for corn that will ultimately be commercialized as the Agrisure Viptera trait, contains the Via3A protein and protects against one of the broadest ranges of aboveground insect pests to date.

**2004**
Syngenta donates enhanced Golden Rice seeds and genetic lines to the Golden Rice Humanitarian Board. The increased pro-Vitamin A levels in the enhanced Golden Rice are more than 20-fold over the original Golden Rice. This product and the nutritive benefits it provides can save lives, prevent night blindness and help millions of children in developing countries.

**2005-2006**
The Agrisure® traits portfolio is launched, bringing its first two commercial traits to market - Agrisure GT (2005) and Agrisure RW (2006), which confer glyphosate tolerance and corn rootworm control, respectively.

**2007**
Syngenta scientists submit MR162 for regulatory approvals. MR162, a unique insect control event for corn that will ultimately be commercialized as the Agrisure Viptera trait, contains the Via3A protein and protects against one of the broadest ranges of aboveground insect pests to date.

Syngenta opens the Syngenta Beijing Innovation Center, a biotech research and technology center, in Beijing, China. Its focus is an early-stage evaluation of genetically engineered traits and advanced breeding for key crops such as corn, soy and rice in the areas of yield improvement, drought resistance and disease control.

EPA approves the ViCoat cotton trait, the first commercial registration of any ViCoat-based product.

**2008**
Syngenta launches water-optimized Agrisure Artesian® hybrids, which manage water more effectively. The gene-based, native technology was discovered and deployed after years of advanced breeding efforts.

**2009**
Science magazine names Syngenta as one of the Top 20 Biotech and Pharma Employers.

**2010**
Syngenta adds sustainability to its mission as a founding member of The Syngenta Beijing Innovation Center and the Syngenta operations in Research Triangle Park, N.C., begin expansion efforts. MR162, marketed as the Agrisure Viptera trait, receives USDA regulatory approval for cultivation.

Syngenta opens a $204 million expansion in Research Triangle Park, N.C., representing a new infrastructure record for the company globally.

**2012**
Syngenta uses an enzyme technology, the first biotech corn output trait designed to enhance ethanol production.

**2013**
Syngenta opens the doors of the Advanced Crop Lab at the Syngenta RTP Innovation Center, a first-of-its-kind greenhouse and research facility with more than an acre under glass and 46 growth environments that simulate weather around the globe.

**2014**
Enogen is recognized as Agmarketer’s Product of the Year, chosen for the benefits it delivers to farmers, ethanol plants and rural communities.

Syngenta aims to help ensure a safe and nutritious food supply for a growing world population. In addition to its work to develop novel traits that improve crop yields and protect the environment, Syngenta has a goal to deliver 200 million acres of enhanced Golden Riceseeds and genetic lines to the Golden Rice Humanitarian Board. Syngenta scientists submit MIR162 for regulatory approvals. MIR162, a unique insect control event for corn that will ultimately be commercialized as the Agrisure Viptera trait, contains the Via3A protein and protects against one of the broadest ranges of aboveground insect pests to date.

Syngenta donates enhanced Golden Rice seeds and genetic lines to the Golden Rice Humanitarian Board. The increased pro-Vitamin A levels in the enhanced Golden Rice are more than 20-fold over the original Golden Rice. This product and the nutritive benefits it provides can save lives, prevent night blindness and help millions of children in developing countries.

**2015**
Mary-Dell Chilton is inducted into the National Inventors Hall of Fame and the USDA Hall of Heroes for her cutting-edge work in biotechnology.

Syngenta wins the INFORMS Franz Edelman Award for developing new analytics tools to help seed breeders reduce the time and cost required to develop high-yielding crops. The award demonstrates the advances in plant breeding that—when deployed in connection with biotechnology—are helping farmers improve productivity.

**2017**
Syngenta researchers establish that haploid induction, which helps save years off the seed breeding process in corn, is triggered by a defect in an enzyme coded by the MTL1 gene. The findings are published in the scientific journal Nature.

Syngenta launches Enogen Feed for the beef and dairy markets. This in-seed innovation benefits growers producing grain or silage for livestock feed.

ChemChina acquires Syngenta in a transaction that helps ensure continued growth for growers and continued R&D investment across technology platforms and crops. It also allows for further expansion of Syngenta’s presence in emerging markets, and notably, in China.