

Breeding more options

Innovation is an advantage only when it creates opportunity.

Monsanto's early investment in the dual platforms of biotechnology and breeding has led to new products that give our farmer customers more choices for improving their productivity. Our capability in technology and our swift commercial delivery offer a unique combination that is opening new options for our customers, the industry, and our business.

Our business performance reflects the strategic value that our seeds-and-traits approach brings to the industry. More important, today's business achievements position us well for continued acceleration in 2006 and beyond.

Farmer needs drive our approach

In the competitive seeds-and-traits industry, no single product unilaterally drives farmer interest. Rather, it is the complete package of a seed and its traits that interests our customers.

The reason is simple: Farmers buy yield. They want the seed that has the potential for the highest yield, and they want the tools to protect that yield potential from environmental factors such as disease, insect damage, and weeds.

Meeting farmers' demand means offering the best possible germplasm, incorporating the newest generation of biotechnology traits, and combining those biotechnology traits into stacked combinations that allow farmers to do more with every seed.

We are successful only when our customers are successful. Today, our commercial approach and our research philosophy are focused on the expectation that we can deliver more choice to farmers. The momentum that we've

achieved with our seeds-and-traits strategy reflects our success in translating innovation into value for our customers.

Doing more with our germplasm

The first element of the yield package that interests a farmer is the seed itself. Across our business, we're finding ways to invest in our germplasm resources to build upon our strong seed position in the existing market and to create new value and new markets.

Breeding is bolstering our seed position. This year, Monsanto increased our U.S. *DEKALB* and *Asgrow* branded corn share by two share points, for a gain of six share points in the last four years (see "Tools of our technology yield seed market share growth," below).

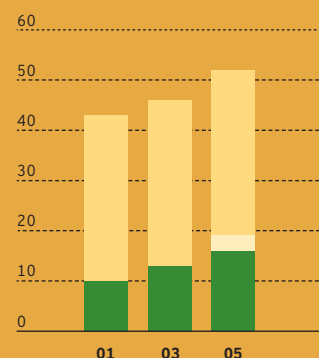
Tools of our technology yield seed market share growth

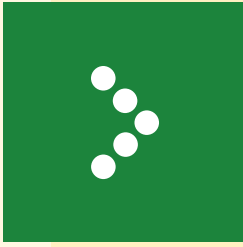
By emphasizing technologies such as molecular breeding, we are making significant gains that add to the performance and value of the seed farmers buy. That's a commercial benefit that is evident especially in the United States. From 2004 to 2005, Monsanto's *DEKALB* and *Asgrow* corn seed brands grew our U.S. market share by two points. Similarly, the customers of our Holden's/Corn States business, more than 250 regional seed companies that license germplasm and biotechnology traits from us, also grew a collective share point this year. Including our newly created American Seeds, Inc. subsidiary, a holding company that gives Monsanto a new, locally oriented seed presence, the market for germplasm we've developed has grown by eight market share points in five years.

U.S. corn market share by brands and licensees

(in percent)

- Holden's/Corn States licensees
- American Seeds, Inc.
- *DEKALB* and *Asgrow* brands





Stacked-trait expansion is driving corn success

One of Monsanto's most significant competitive differentiators is our ability to stack traits. Farmers don't want to have to decide between one trait and another; they want to be able to combine both traits in one seed to displace more of the pesticides required by competing systems. During the 2005 growing season,

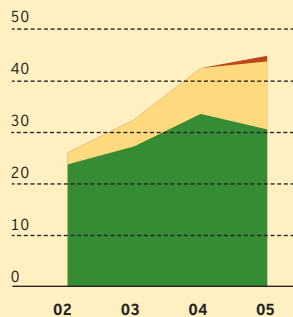
Monsanto launched *YieldGard Plus* with *Roundup Ready Corn 2*, the first triple-stacked product in the industry.

It combines the insect protection of *YieldGard Corn Borer* and *YieldGard Rootworm* traits and herbicide tolerance of the *Roundup Ready* trait in a single offering. With *Roundup Ready* corn providing a base, the growth in corn is being driven by the increased use of stacked traits. In just the first year of commercial planting, farmers in the United States planted 1.1 million acres of triple-stacked corn. That complements the 13 million acres U.S. farmers planted to seed that combined two traits in a stacked offering.

U.S. corn trait acres

(acres, in millions)

- single trait
- double-stacked traits
- triple-stacked traits



This success speaks to the value our customers place on the technology resources and tools we bring to the seed business: the richness of our seed germplasm, the quality of our breeding program, and the value of our biotechnology traits.

That is not isolated success. Our breeding efforts have put us at the forefront of commercial success in the global corn marketplace. In our Europe-Africa region, 2005 brought a share gain of 2.2 percent. In our Asia-Pacific region, the share gain was 1.9 percent. Today, we hold a leading market share position in every key corn-growing region.

New approaches are unlocking new value. In 2005, Monsanto launched one of the first products in the industry with direct consumer benefits. Our *Vistive* low-linolenic soybeans can reduce or virtually eliminate the amount of trans fats in processed foods. *Vistive* soybeans, which went from concept to commercial launch in 36 months, are the result of Monsanto's capabilities in breeding. Using markers and crop analytics technology, we were able to mine our soybean germplasm to identify and breed for soybeans low in naturally occurring linolenic acid.

Ultimately, *Vistive* soybeans present new opportunities for the food industry because the resulting oil doesn't require hydrogenation to be used in many types of processed foods. It also creates new opportunity and value for our farmer customers, who planted approximately 100,000 acres of these soybeans. With increased seed availability, we expect more than a half million acres will be planted with *Vistive* soybeans next year.

Adding value to the seed with technology

2005 marked the 10th year of commercial planting of biotechnology crops. In that decade, farmers have come to depend on the benefit of having technology packaged in the seed. That shifts more and more value from other farm inputs to the seed itself.

Current traits continue to add value.

Through the 2005 planting season, we have introduced 14 products with biotechnology traits or different combinations of products. Those traits were used on almost 195 million acres throughout the world. This rapid adoption and continued reliance on our traits reflect the value our biotechnology traits create for farmers.

A peer-reviewed academic study published in 2005 confirmed that the introduction of biotechnology traits has brought farmers significant benefits. The study indicates that biotechnology crops added \$6.5 billion to worldwide farm income in 2004 and that the cumulative increase in farm income from biotechnology crops since 1996 exceeded \$27 billion. This economic benefit stems primarily from significant cost savings to farmers, who can use less pesticide and plow their fields less often.

The opportunity of the first generation of biotechnology traits is still expanding. A highlight of fiscal year 2005 was the significant growth of cotton sales in India. After just four years of commercial planting of *Bollgard* cotton there, more than 350,000 farmers planted 3 million acres of it in 2005 (see "Indian farmers quick to adopt *Bollgard*," page 7).

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New technology choices continue to transform the industry.

We have not rested on the success of the first round of biotechnology products. We continue to innovate and to bring forward new choices in traits and trait combinations.

We were the first to bring a biotechnology trait to the market, with *Roundup Ready* soybeans and *Bollgard* cotton in 1996. We were the first to combine two biotechnology traits in a stacked offering, with our *Bollgard* and *Roundup Ready* cotton in 1997. We were the first to bring a second-generation technology upgrade with our *Bollgard II* cotton, which was introduced in 2003.

This year, we launched the first product in the industry to combine three biotechnology traits in a stacked offering, *YieldGard Plus* with *Roundup Ready* Corn 2. It includes *YieldGard* Corn Borer, *YieldGard* Rootworm, and *Roundup Ready* Corn 2. More than a million acres were planted with this corn in its initial

year. We expect the acreage to triple in 2006, as stacked-trait penetration accelerates.

Next year, we also expect the largest-acre commercial launch of a biotechnology product ever when farmers plant our second-generation *Roundup Ready* Flex cotton.

Setting up for growth

Again in 2005, the strategic merits of our seeds-and-traits strategy were borne out in the marketplace. Sales in our seeds-and-traits businesses increased by 40 percent, and the gross profit generated through our seeds-and-traits sales reached almost \$2 billion. That success provides positive momentum that should help us accelerate our growth over the next two to three years.

Indian farmers quick to adopt *Bollgard*

Fiscal year 2005 saw dramatic growth for our cotton business in India. Penetration of *Bollgard* more than doubled, with 3 million acres planted for the 2005 growing season. This rate of adoption reflects the value the Indian farmer is receiving from the *Bollgard* trait. Indian farmers using the *Bollgard* technology in cotton achieved significant benefits, including:

- reducing spending by 81 percent per acre on pesticides used to control the cotton bollworm;
- decreasing pesticide applications used to control the cotton bollworm by 74 percent per season; and
- increasing profit per acre by more than 60 percent.

These statistics bode well for our future growth in India. Along with strong results for our Australian cotton business, they show how our breeding improvements are accelerating global expansion of traits and fueling increased market demand.

Indian farmers planted 3 million acres of *Bollgard* cotton in the 2005 growing season, more than doubling our penetration.

