

Monsanto Company 2002 ANNUAL REPORT



03017258

AR/S

12-31-02

1-14-03

1-16/67

Integrated businesses
Financial focus
Technology leadership

PROCESSED

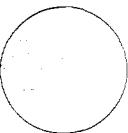
T MAR 18 2003

THOMSON
FINANCIAL



tolerance. With our unique combination of products and our unparalleled innovation in plant biotechnology, we create integrated solutions that bring products and technologies together to improve productivity and to reduce the costs of farming. We manage our business in two segments: Agricultural Productivity, and Seeds and Genomics.

Sales by business segment
in percent



- Agricultural Productivity
- Seeds and Genomics

Sales by geographic region
in percent



- North America
- Latin America
- Europe-Africa
- Asia-Pacific

SEEDS

Monsanto serves farmers with high-quality brand-name seeds, such as *DEKALB* and *Asgrow*. We also use a broad, high-quality collection of genetic material — called germplasm — to develop new varieties for our brands and other seed companies' brands.

Monsanto holds the No. 1 or No. 2 position in key corn and soybean markets in North America, Latin America, and Asia. Monsanto also holds leading positions in the European and African wheat and oilseeds markets.

Monsanto uses genomics-based capabilities both to breed improved hybrids and varieties and to identify biotechnology traits. Our strong germplasm base allows us to commercialize high-quality seeds and to launch new trait products.

TRAITS

Biotechnology traits, such as herbicide tolerance in *Roundup Ready* soybeans and insect protection in *YieldGard* corn, give farmers more ways to produce crops efficiently. Monsanto traits help farmers reduce their tillage and their pesticide use.

Monsanto is the world leader in biotechnology crops. Seeds with Monsanto traits accounted for more than 90 percent of the acres worldwide with herbicide-tolerant or insect-protected crops in 2002.

Monsanto develops new products while seeking regulatory approvals to expand existing seeds and traits to new markets. We communicate the benefits of biotechnology to the food industry and public.

ROUNDUP HERBICIDE



HARNESS AND OTHER SELECTIVE HERBICIDES



PRODUCTS FOR ANIMAL AGRICULTURE



SEEDS



TRAITS



MONSANTO AT A GLANCE

Monsanto is a leading provider of agricultural products and integrated solutions for farmers. We make *Roundup*, the world's best-selling herbicide, and other herbicides. We produce leading seed brands, including *DEKALB* and *Asgrow*, and we provide farmers and other seed companies with biotechnology traits for insect protection and herbicide

	BUSINESS SEGMENTS	AGRICULTURAL PRODUCTIVITY	SEEDS AND GENOMICS
		Our Agricultural Productivity segment includes <i>Roundup</i> and other herbicides, our lawn-and-garden herbicide business, and our animal agriculture business.	The Seeds and Genomics segment consists of global businesses in seeds and related biotechnology traits, and technology platforms based on plant genomics, which increases the speed and power of genetic research.
	ROUNDUP	SELECTIVE HERBICIDES	ANIMAL AGRICULTURE
KEY PRODUCTS	<i>Roundup</i> herbicide and our other glyphosate-based products offer effective nonselective weed control; they form the basis of integrated solutions with other Monsanto products.	Selective herbicides, such as <i>Harness Xtra</i> , <i>Machete</i> , and <i>Maverick</i> , control specific weeds in corn, rice and wheat.	Products for animal agriculture improve dairy cow productivity and swine genetics.
MARKET POSITION	<i>Roundup</i> remains the world's No. 1 selling herbicide. Global sales of <i>Roundup</i> and other glyphosate-based herbicides exceed those of the next six leading herbicide chemistries combined.	Monsanto's acetanilide-based selective herbicides hold the No. 2 U.S. position for control of grassy weeds in corn.	<i>Posilac</i> bovine somatotropin is the largest-selling dairy-related animal health product in the world.
BUSINESS OBJECTIVE	Monsanto is responding to competition by supporting the value of the <i>Roundup</i> business through continued innovation and low-cost production.	Monsanto continues to provide selective herbicides that offer farmers value while efficiently managing these products within our larger portfolio.	<i>Posilac</i> provides a steady contribution to gross profit. New product formulations and more efficient manufacturing capacity support the growth of <i>Posilac</i> .

2002 FINANCIAL HIGHLIGHTS

(Dollars in millions, except share and per share amounts)

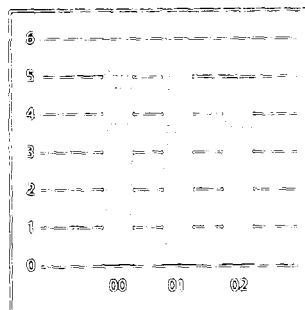
	2002	2001	Change
Operating Results			
Net Sales	\$ 4,673	\$ 5,462	(14)%
EBIT	\$ 261	\$ 532	(51)%
EBITDA	\$ 721	\$ 1,082	(33)%
Net Income (Loss)	\$ (1,693)	\$ 295	NM
Diluted Earnings (Loss) per Share	\$ (6.45)	\$ 1.12	NM
Income Before Cumulative Effect of Accounting Change	\$ 129	\$ 295	(56)%
Diluted Earnings per Share Before Cumulative Effect of Accounting Change	\$ 0.49	\$ 1.12	(56)%
Other Selected Data			
Free Cash Flow	\$ 639	\$ 183	249 %
Capital Expenditures	\$ 224	\$ 382	(41)%
Depreciation and Amortization	\$ 450	\$ 554	(17)%
Shares Outstanding (year-end, in millions)	261.4	258.1	1 %

NM = Not Meaningful

Net sales

dollars in billions

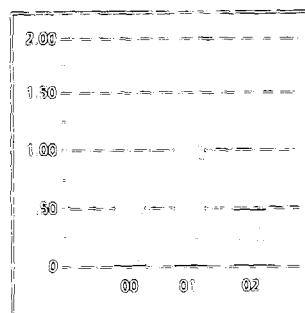
In 2002, net sales for Monsanto decreased 14 percent, to \$4.7 billion. Continued competitive pressures and unfavorable weather conditions in the United States contributed to lower sales of Roundup herbicide. Sales of Roundup and seeds were significantly lower in Latin America during 2002 because of actions taken to reduce the volatility of the business there.



Earnings per share

(before cumulative effect of accounting change)
in dollars

In 2002, Monsanto recorded diluted earnings per share of \$0.49 before the cumulative effect of accounting change for goodwill impairment. Earnings are expected to improve in 2003 as increased profits from our seeds and traits businesses and careful management of the Roundup franchise in the United States combine with expected solid business results in Latin America following the actions taken in 2002 to reduce risk in Argentina and Brazil.



Free cash flow

dollars in millions

Monsanto surpassed its target for free cash flow in 2002. Free cash flow — the sum of cash flows from operations and investing activities — improved from \$183 million in 2001 to \$639 million in 2002. In 2003, the company expects free cash flow generation to be in the range of \$350 million to \$400 million.

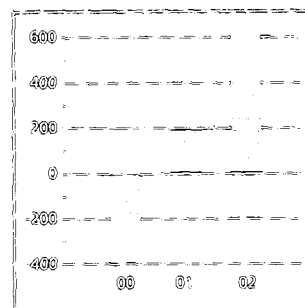


TABLE OF CONTENTS

Monsanto at a Glance

Foldout

Letter to Shareowners

2

Glossary

16

Financial Review

17

Board of Directors

70

Executive and Other Officers

71

Shareowner Information

72

Terms specific to our company or industry are defined in the glossary on page 16.

ABOUT THE COVER:

This report features farmers who count on Monsanto for superior products and integrated solutions that improve productivity and simplify farming. Photographs in our 2001 report featured crops at the height of the growing season; this report shows fields during and after harvest. Dale Zoerb harvests 3,500 acres of corn and soybeans on his farm in Litchfield, Nebraska. Mr. Zoerb (at left in cover photo with Monsanto representative Mike Wardyn) plants Monsanto's DEKALB and Agrisort brand seeds. He chooses seed hybrids and varieties with Monsanto traits, such as Roundup Ready soybeans (shown here), developed through biotechnology to tolerate Monsanto's Roundup herbicide. He looks forward to the commercialization of YieldGard Rootworm corn, which replaces the use of certain chemical insecticides with self-protection against corn rootworm.

INTEGRATED BUSINESSES

Monsanto's integrated businesses offer high-value products and unique solutions to farmers.



page 4

FINANCIAL FOCUS

We're intensifying our financial focus; we're dedicated to delivering on our cash and earnings commitments.



page 10

TECHNOLOGY LEADERSHIP

Technology leadership – the result of our unique investment in biotechnology and genomics – will drive long-term growth.



page 12

VALUE DRIVERS
2002 UPDATE

In Monsanto's 2000 annual report, we identified six drivers that create additional value for farmers and shareowners. As we did in 2001, we're reporting on our performance in each area, and identifying key next steps.

Create integrated solutions for farmers

In 2002, we advanced solutions for conservation tillage and for processing food, feed and fuel. Next steps:

- Offer more *Processor Preferred* and *Residue Proven* seeds, including new *Processor Preferred* corn hybrids for enhanced ethanol production.
- Intensify focus on markets where we can offer a full complement of seeds, traits and chemicals to create integrated solutions.

Sustain a strong market position for Roundup herbicide and other products

In 2002, revenues and earnings from *Roundup* declined, while our seeds and traits businesses turned in solid results.

Next steps:

- Support the value of *Roundup* through product innovation and low-cost production.
- Breed improved germplasm and seeds to drive growth in sales and penetration of biotechnology traits.

Broaden commercialization of biotechnology products

In 2002, global acreage of biotechnology crops continued to expand, but some key regulatory approvals were delayed.

Next steps:

- Continue to seek approvals for biotechnology products and to expand planting around the world.
- Continue public education in biotechnology; advocate science-based regulatory approval processes.

Deliver strong financial performance from integrated operations

In 2002, we surpassed our target for increasing free cash flow, but revenues and earnings declined. Next steps:

- Continue to deliver free cash flow in 2003 by increasing earnings and focusing on working capital management.
- Improve earnings through solid growth in seeds and traits, successful management of *Roundup* in the United States, and improved operations in Latin America.

Use technology capabilities to speed product development

In 2002, our genomics research identified more than 10 product leads and moved them toward field tests. Next steps:

- Triple the gene constructs tested for valuable crop traits in 2003 by applying our genetic database and high-throughput screening capabilities.
- Use our research and development (R&D) capabilities to move the best product candidates to market quickly and economically.

Commercialize products in our pipeline

In 2002, we commercialized *Bollgard* cotton in India. By early 2003, we received final U.S. approval for *YieldGard Rootworm* corn and *Bollgard II* cotton.

Next steps:

- Bring to market higher-yielding crops developed through marker-assisted breeding and biotechnology.
- Advance pipeline candidates, including those that benefit farmers, processors and consumers.

Dear Shareowners: 2002 was a difficult year for the agricultural industry and Monsanto, and it was a major disappointment for our shareowners. We clearly fell short of the earnings projections made early in the year. These disappointments ultimately led to a loss of confidence, which resulted in a change of corporate leadership.

That said, let me briefly review the market dynamics and how Monsanto responded to them in 2002.

On one hand:

- Globally, farmers increased by an impressive 12 percent their planting of crops that contain Monsanto's insect-protected and/or herbicide-tolerant biotechnology traits.
- Innovative work and continuous advancements made by our seed breeders paved the way for a two-point market share gain by our U.S. branded corn seed business.
- Our sales and marketing organization maintained its leadership position in agricultural herbicides, and we introduced value-added formulations of *Roundup* herbicide in key markets.
- Monsanto set the technology innovation bar even higher: We launched *Bollgard* insect-protected cotton in India, readied two new products for U.S. launch in 2003, and moved several promising candidates forward in our product pipeline.

On the other hand:

- Serious market and economic volatility in Argentina and Brazil required us to revamp our business approach. This new approach maximized cash, but it reduced revenues and earnings. We're confident that we did the right thing, given the long-term importance of Latin America to our business.

- In 2002, much of the United States experienced its worst drought since the Dust Bowl of the 1930s. Adverse weather and continuing competitive pressure on our flagship product, *Roundup* herbicide, reduced U.S. revenues of branded *Roundup* by 26 percent.

With the tumultuous year 2002 behind us, the fact remains that Monsanto has two unique assets: our strategic view of agriculture and dedicated people who continue to implement our integrated business strategy aggressively. We have the leading herbicide franchise in the world, top brands of soybean and corn seeds, and unparalleled success in developing and commercializing technologies that improve farmers' productivity. All of these elements have demonstrated early success, but the real power of this integrated approach has yet to be realized.

Monsanto's board of directors, which fully supports this strategy, is eager to reap its rewards for shareowners. Our substantial investment in plant biotechnology and genomics must be translated into shareowner value. To make that happen, the entire Monsanto organization will focus on four principles.

First, we will make realistic assumptions about the markets and our position in them. This is especially important for a company such as ours, which holds leadership positions in markets that can be volatile, such as Argentina and Brazil.

"In late 2002, shareowners saw evidence of a fundamental shift: Monsanto's transformation from a company based on a strong chemistry portfolio and especially on *Roundup* herbicide, to a company based on seeds and biotechnology traits businesses."



FRANK ATLEE, CHAIRMAN, PRESIDENT AND
CHIEF EXECUTIVE OFFICER

Second, we will pursue aggressive plans to maintain or increase our leadership edge. Thanks to the hard work of Monsanto people around the globe, we have leading positions in chemistry, seeds, and biotechnology traits that help our customers grow food and fiber more productively than ever before.

In late 2002, shareowners saw evidence of a fundamental shift: Monsanto's transformation from a company based on a strong chemistry portfolio and especially on *Roundup* herbicide, to a company based on seeds and biotechnology traits businesses. During this transformation, we will continue our careful management of the *Roundup* franchise — including the development and launch of new product improvements for farmers — to ensure that it remains an important contributor to Monsanto.

We are making progress on regulatory approval of crops improved through biotechnology, albeit at a slower pace than we would like. We will continue to supply regulatory agencies around the world with all the data they need to make good decisions about the safety of these products.

Third, we are committed to balancing earnings and free cash flow generation — and we intend to deliver on both targets. In 2002, we exceeded our free cash flow target by generating \$639 million, an increase of \$456 million compared with 2001 free cash flow. We will continue to optimize our working capital investments. We are confident that positive free cash flow is sustainable.

Fourth and finally, we are committed to delivering results today while creating a promising future. There is no doubt in my mind that Monsanto is the premier company in the agricultural industry. My observation during 32 months as chairman of the board has been strongly reinforced during the three months that I've

been chief executive officer: Monsanto people are unwavering in their pursuit of innovations that solve problems for their customers.

You can read more about our commercial businesses and our exciting product pipeline in the pages of this annual report.

I offer my thanks to Hendrik Verfaillie, who served as the new Monsanto's first CEO. He was instrumental in establishing Monsanto as the industry's biotechnology leader. In late 2000, Hendrik instituted the New Monsanto Pledge. We remain committed to that Pledge, and I will work to ensure that our dedication to its principles continues. Again this year, we are preparing a full report on Monsanto's performance on each Pledge principle. That report will be available at www.monsanto.com by early April.

We welcome hundreds of thousands of new shareowners who joined us as a result of the August 2002 spinoff from Pharmacia. To all our shareowners, I reaffirm the commitment of everyone at Monsanto to focus on goals that return value to our owners. I ask that you judge our performance in 2003 against the goals outlined here. I speak for all Monsanto people worldwide when I say that we intend to deliver. Thank you for your investment in Monsanto.



Frank V. AtLee
Chairman, President and Chief Executive Officer

March 6, 2003



"I have confidence in Roundup to control weeds. With Roundup Ready corn and soybeans, I can use Roundup all season long to keep my fields clean."

Dale Zoerb uses *Roundup* on his Nebraska farm — including this field where *Residue Proven/Roundup Ready* soybeans are being harvested. Mr. Zoerb tested new *Roundup WeatherMAX* in 2002. *Roundup WeatherMAX* provides a higher level of weed control than its leading competitors. Ninety-five percent of farmers surveyed were satisfied with the performance of *Roundup WeatherMAX*.

Monsanto's integrated businesses offer high-value products and unique solutions to farmers.

Monsanto's integrated businesses provide farmers with high-value *Roundup* herbicide and other herbicides, top brand seeds, and biotechnology traits. By combining these capabilities, we can offer integrated solutions that improve productivity and simplify farming.

Roundup and Productivity Products

In the face of increased competitive pressure, we're supporting the value of the *Roundup* brand through continued product innovation and low-cost production.

Roundup remains the world's largest-selling herbicide. Monsanto is the leader in world markets for glyphosate — the active ingredient in *Roundup*. We'll continue our vigorous efforts to sustain this important franchise.

Revenues declined 24 percent in 2002, and gross profit of *Roundup* declined 33 percent. We experienced pressure on prices and market share in the United States. Volumes also were affected by extremely dry weather, which reduced usage. In addition, the steps we took to

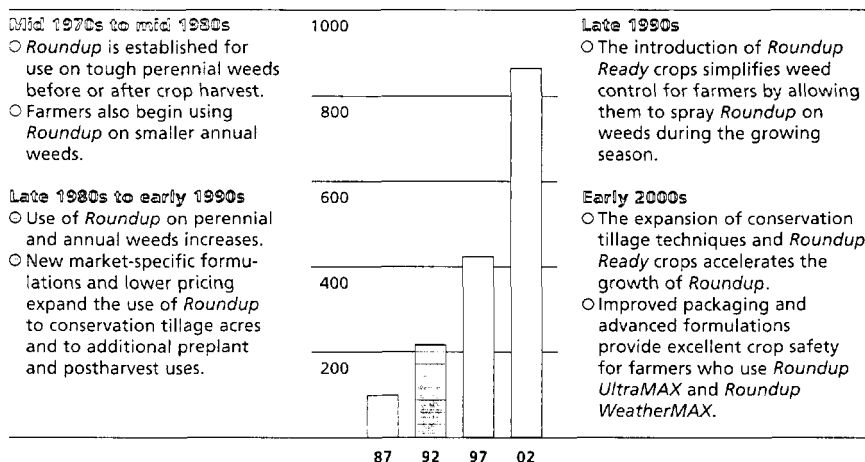
change our business model in Latin America reduced volumes and sales of *Roundup* in 2002.

Roundup has maintained its technological leadership by continually developing new formulations (GRAPH 1). In the United States, we're currently introducing *Roundup WeatherMAX*, which provides consistent weed control in a variety of challenging weather conditions. With proprietary *Transorb II* technology, *Roundup WeatherMAX* penetrates the weed leaf within minutes. This unique attribute gives farmers greater peace of mind that *Roundup WeatherMAX* will perform, even if it rains only 30 minutes after application.

In more than 400 field trials, *Roundup WeatherMAX* provided a higher level of weed control than its leading

GRAPH 1

Continuous innovation drives *Roundup* brand leadership and volume growth
U.S. volume in percent, 1987=100



Monsanto has maintained a differentiated market position for *Roundup* by offering breakthrough technology and improved formulations to meet specific market needs. *Roundup* was introduced to U.S. farmers in 1974, and product volumes have grown substantially. Since 1987, U.S. volumes of *Roundup* have increased more than eight-fold. Monsanto holds more than 250 patents worldwide, including 50 in the United States, on formulations of *Roundup*.

competitors. And 95 percent of farmers surveyed were satisfied with *Roundup WeatherMAX* weed control.

In Germany, Monsanto introduced *Roundup Turbo*, a dry formulation, in 2002. This higher-value product increased earnings in a country where the patent for *Roundup* expired 13 years ago.

We're maintaining our low-cost position through investments in technology. New technology for manufacturing glyphosate reduces waste and costs. This creates environmental as well as economic benefits. Since 1996, Monsanto has reduced unit production costs for *Roundup* by 29 percent.

We completed an extensive capital program to enhance production capacity for *Roundup*. The centerpiece of the program — the Camaçari plant in Brazil — exceeded targets for efficiency, yield, and quality in its first year of operation. We closed several higher-cost operating units during 2002.

Monsanto's acetanilide-based selective herbicides continue to hold strong shares in several markets — including the No. 2 U.S. position for control of grassy weeds in corn. But sales were affected by adverse weather conditions in 2002.

Sales of *Posilac* bovine somatotropin, the largest-selling dairy-related animal health product in the world, increased 6 percent in 2002.

OUTLOOK: *Roundup* will continue to make a major contribution to cash and earnings, although we expect competitive pressure on prices and volumes, particularly in the United States.

We will support the value of *Roundup* — which has been off-patent in most world markets for many years — by improving formulations and offering integrated solutions that combine *Roundup* with Monsanto seeds and traits. We'll maintain our low-cost position in manufacturing and superior logistics.

If more normal weather conditions return, agricultural chemical sales should recover from 2002 levels, but we expect the gross profit contribution of *Roundup* to continue to decline.

Seeds

An increase in Monsanto's share of the U.S. market for corn seed in 2002, following a similar gain for soybeans in 2001, reflects the quality of Monsanto's seed portfolio.

Our strong plant breeding programs continue to produce superior germplasm, which has led to market share gains for both our branded and licensed corn and soybean seeds. In 2002, Monsanto's *DEKALB*



Integrated solutions for con-till farmers

Bill Steed of Shelby, Mississippi, plants *Roundup Ready* soybeans in conservation tillage (con-till) on his farm. Con-till is a farming practice that replaces plowing with the judicious use of herbicides to control weeds. *Roundup Ready* soybeans are developed through biotechnology to tolerate *Roundup*,

the herbicide of choice for con-till. Mr. Steed says that *Roundup Ready* soybeans "did more than anything else to make it possible for me to practice con-till."

Monsanto has also developed *Residue Proven* corn and soybean seeds — hybrids and varieties that we identify as well-suited for planting in the crop residue left on con-till fields. Nine of 10 farmers

surveyed expressed overall satisfaction with *Residue Proven* seeds.

Residue Proven seeds with the *Roundup Ready* trait that allows in-season use of *Roundup* herbicide are a good example of Monsanto's ability to offer integrated solutions: We combine our seeds, traits and chemicals to simplify farming.



Bollgard cotton improves yields for Indian farmers

Bollgard insect-protected cotton was commercialized in India in 2002 following regulatory approval early in the year. India has more land under cotton cultivation than any other country in the world. But yields there have historically been less than half the global average. More than

and *Asgrow* brand seed combined for a two-point share gain in the U.S. corn market amid strong competition. In fact, the volume we *added* was greater than the total sales of all but five of some 200 other U.S. brands. Corn seeds licensed through our Holden's Foundation Seeds business also gained a share point in 2002.

In U.S. soybeans, Monsanto brand seeds gained two share points in 2001 and held most of that increase in 2002, even though fewer soybean acres were planted. These gains reflect outstanding product performance: Monsanto brand corn and soybean seeds delivered a yield advantage over competitive seeds in key U.S. growing zones in 2001 and 2002.

Monsanto has built a leading position in global seeds. Our branded seed and the germplasm we license to other seed companies hold 38 percent of the global corn market and 29 percent of the global soybean market.

In Latin America, Monsanto seed brands hold an average of 50 percent share in key markets. In Asia, Monsanto brand corn seed sold by us and seed sold by companies that license our germplasm account for more than 60 percent share of the corn markets where Monsanto competes.

We also differentiate our seed brands through innovation and integrated solutions. Solutions that combine our seeds with Monsanto traits and herbicides create

value for farmers. So do innovations such as *Processor Preferred* soybean and corn seeds. We identify soybeans with higher oil and protein content for food and feed production. We're also working to identify hybrid corn with higher fermentable starch for ethanol production. This provides a way for farmers and processors to share the value.

Monsanto's leadership is based on successful integration of the seed businesses we acquired in the late 1990s. This success has produced lower costs, higher-quality seed, and improvements in our overall seed portfolio.

In 2002, we completed a multiyear \$110 million upgrade of acquired seed facilities in North America. Since 2000, our North American facilities have reduced the total unit cost for Monsanto brand corn seed by 15 percent and soybean seed by 12 percent. Investments including computer-aided drying, continuously monitored bulk storage, and climate-controlled warehousing have also improved seed quality.

The successful integration of our seed businesses has allowed us to optimize our seed portfolio. In corn, for example, new hybrids — those less than three years old — increased from 56 percent of our product portfolio in 1998 to 68 percent in 2002. Our target is 70 percent to 75 percent of the sales mix. This range will let us incorporate the latest breeding and technology advances into the product line without sacrificing product durability.

OUTLOOK: With strong seed brands and high-performing germplasm, Monsanto can maintain a leading market position in key crops and geographies.

By improving the quality and performance of our seed portfolio — through a strong breeding program, efficient seed manufacturing facilities, and continued innovation — we intend to build the value of Monsanto brands and support expansion of our biotechnology traits.

Traits

Global acreage of biotechnology crops increased again in 2002, but regulatory issues continue to limit near-term growth of current and future Monsanto traits.

In Brazil, our request to allow commercial planting of *Roundup Ready* soybeans is still delayed by court proceedings. In the European Union (EU), a de facto moratorium on approvals of agricultural biotechnology products remains in effect. No biotechnology crops have been approved for importation into the European Union since 1998.

The de facto moratorium in Europe reduces potential expansion of current and future biotechnology crops in the United States, because it requires channeling of farm goods with biotechnology traits not approved for EU importation. This poses challenges for farmers who benefit from using those new traits on their farms.



30 percent of India's cotton crop is usually lost to pests and disease. During the limited 2002 launch of *Bollgard* on approximately 30,000 hectares (74,100 acres) in India, farmers who used *Bollgard* averaged yield gains of 30 percent. *Bollgard* cotton improves farmers' income while reducing the use of pesticides. Nilesbhai Patel (at right

above), a farmer in Gujarat province, inspects his *Bollgard* cotton crop with Monsanto marketing manager P Rath. Mr. Patel plans to plant *Bollgard* cotton again in 2003.

Despite these disappointments, biotechnology crops containing Monsanto's traits continued to win approvals and to expand to more acres during the year (GRAPH 2). *Bollgard* cotton was planted in India after regulatory approval was received in early 2002. By early 2003, *YieldGard Rootworm* corn and *Bollgard II* cotton received final approvals for U.S. planting.

U.S. acreage of *Roundup Ready* corn — developed through biotechnology to tolerate *Roundup* herbicide — increased to almost 8 million acres, or roughly 10 percent of the U.S. corn crop. In the United States, the portion of Monsanto brand corn seed carrying a biotechnology trait increased from 50 percent to more than 60 percent — almost twice the average trait penetration in the industry. Likewise, the portion of Monsanto's U.S. branded soybean seeds containing a trait is more than 95 percent, reflecting the popularity of *Roundup Ready* soybeans among farmers.

Other progress during 2002 included approval for planting *Bollgard II* cotton in Australia, import approval for *YieldGard Rootworm* corn into Japan, and the reregistration of *Roundup Ready* soybeans in Switzerland. The Republic of South Africa approved the cultivation and use of *Roundup Ready* corn, as well as a stacked-trait *Bollgard/Roundup Ready* cotton. The

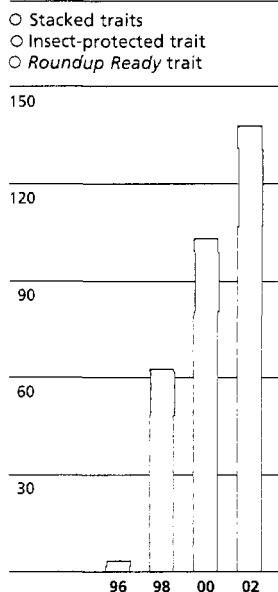
Philippines approved *YieldGard Corn Borer* corn, the first biotechnology product in that nation. South Korea adopted a review process for biotechnology crops that includes a mandatory decision deadline.

OUTLOOK: We'll continue to pursue a science-based approval process for biotechnology crops in key global markets. We'll also develop new biotechnology crops, including stacked-trait products.

We're pursuing new approvals for Monsanto traits in markets around the world. We're working with the industry to address specific issues, such as labeling of food products that include biotechnology crops. We're building general understanding and support for plant biotechnology through continued dialogue with several interested groups, through biotechnology industry coalitions, and through outreach to governments, the scientific community, the food industry, and the public.

At the same time, we're introducing and expanding biotechnology products wherever possible. New stacked-trait products offer significant growth potential in markets where these individual traits have already been approved. In anticipation of wider acceptance and approval of biotechnology crops, we're actively developing more high-value traits.

GRAPH 2
Monsanto
biotechnology acreage
continues to grow
acres in millions



In 2002, more than 138 million acres of soybeans, corn, cotton and canola worldwide were planted with Monsanto biotechnology traits. This is an increase of 34 percent over the acreage planted with a Monsanto trait in 2000. Monsanto traits continue to account for more than 90 percent of global acreage planted with biotechnology crops. Higher-value stacked-trait products — seeds with more than one biotechnology trait — account for a growing share of Monsanto's biotechnology portfolio. In 2002, corn and cotton seeds stacked with two Monsanto traits were planted on more than 7 million acres.



Seed quality, performance boost market share

Monsanto brand seeds are winning over more farmers with improved quality and yield performance. Monsanto brand corn seed gained two share points of the U.S. market in 2002. On his farm in Aurora, Nebraska, Ron Perry (right) examines harvested *Asgrow/YieldGard Corn Borer* corn with Monsanto

representative Dave Soukup. Monsanto's successful integration of the seed businesses we acquired in the late 1990s is confirmed by surveys: Farmers rank Monsanto seed highest in several measures of seed quality. The integration also has reduced costs and improved safety at seed production facilities.

Integrated Solutions

The full value of Monsanto's integrated businesses comes from our ability to offer integrated solutions that combine our seeds, traits and chemicals.

For example, farmers who use our high-performance *DEKALB* and *Asgrow* brand corn seed can choose hybrids with one or more Monsanto traits — *YieldGard* insect protection and *Roundup Ready* herbicide tolerance. They can add *Roundup* and a selective herbicide such as *Harness Xtra* for effective weed control. Our integrated solutions are winning a larger share of farmers' input expenditures (GRAPH 3).

Our *Residue Proven/Roundup Ready* seeds, used with *Roundup* herbicide, offer farmers an integrated solution for conservation tillage (con-till).

Con-till is a farming practice that replaces plowing with the judicious use of herbicides to control weeds. Growers benefit from reduced soil erosion and improved soil moisture, and they save the time, money and energy they would have spent on plowing.

Residue Proven seeds are corn hybrids and soybean varieties that we identified as particularly well suited for planting in the crop residue left on con-till fields. Monsanto offered more *Residue Proven* soybean varieties

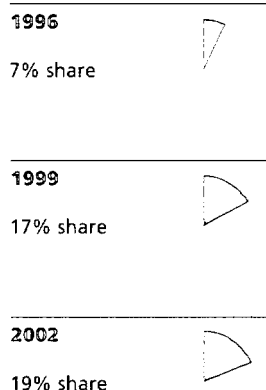
and corn hybrids in 2002 than in 2001. Sales volumes for *Residue Proven* soybean and corn seeds grew substantially. In 2003, *Residue Proven* varieties will account for more than 35 percent of our U.S. seed portfolio in these two crops. This seed program was expanded to Canada and Latin America in 2002.

Global con-till acreage grew by approximately 20 million acres, or 5 percent, in 2002. Further penetration of Monsanto seeds and traits on con-till acres represents a significant growth opportunity.

OUTLOOK: Our integrated solutions approach is a dynamic model that responds to changing market opportunities. We'll continue to develop new integrated solutions in order to maximize the full range of our capabilities. At the same time, we'll focus on specific growth opportunities for our seeds, biotechnology traits and herbicides and, as appropriate, solutions that combine more than one element.

We may also expand the integrated solutions approach through initiatives to engage businesses across the food and feed chain. This could provide additional ways to realize the value of our current and pipeline products and our research platforms.

GRAPH 3
Monsanto's growing
share of U.S. corn
farmers' input
expenditures*
in percent



- Monsanto herbicide
- Monsanto-branded seed and traits in Monsanto-branded seed
- Licensed Monsanto traits in other companies' seeds and all other

Monsanto herbicides, branded seeds and traits have earned a growing share of U.S. corn farmers' input expenditures. In 2002, Monsanto's branded and licensed products accounted for 19 percent of corn farmers' total expenditures for herbicides, insecticides, seeds and traits. This trend demonstrates the value of Monsanto's integrated solutions. Monsanto herbicides sell best to farmers who also use Monsanto seed brands. An independent survey of the largest U.S. growers rated Monsanto as the No. 1 supplier of both crop chemicals and seed products.

*Includes U.S. retail price of herbicides, insecticides, seeds and traits



Biotechnology solutions for cotton farmers

Warren Multer (foreground) is an Integrated Pest Management (IPM) agent with Texas Cooperative Extension. Mr. Multer inspects stacked-trait *Bollgard* and *Roundup Ready* cotton with farmer Jerry Hoelscher on a con-till field in St. Lawrence, Texas. The *Bollgard* trait reduces the need for pesticides by

providing self-protection against certain insects.

Mr. Multer, an entomologist, says that *Bollgard* is effective against the pink bollworm that is a problem in his part of West Texas. In addition, the *Roundup Ready* trait provides tolerance to *Roundup* herbicide, giving farmers the convenience of using *Roundup* during the growing season for effective weed control.

We're intensifying our financial focus; we're dedicated to delivering on our cash and earnings commitments.

Monsanto has set realistic financial targets, and we're dedicated to delivering both our earnings commitment and strong free cash generation. We're seeing positive results from steps taken to improve our performance in Latin America.

Financial Results

In 2002, we surpassed our target for increasing free cash flow. But revenues and earnings declined, primarily because of lower U.S. sales of *Roundup* herbicide and poor results in Latin America.

After achieving positive free cash flow of \$183 million in 2001, we exceeded our new target by increasing free cash flow to \$639 million in 2002 (GRAPH 4). A major factor in the increase was tight management of receivables, including more stringent credit policies, particularly in Latin America, and enhanced collection efforts.

We reduced capital spending by \$158 million, or more than 40 percent, from 2001 to 2002. This reduction was the result of careful planning and the completion of several significant capital projects in 2001.

We sharpened our product focus in some regions, and decreased selling, general and administrative (SG&A) costs by 10 percent. For example, in the Asia-Pacific region, we realigned in markets where we don't have the capabilities to offer integrated solutions. We sold our chemical business in Japan, and we formed a partnership with Nufarm to manufacture and market *Roundup* in Australia.

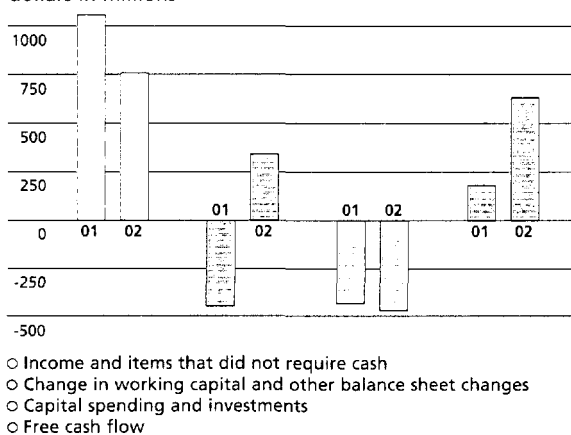
We reduced costs throughout the business. Our 2002 restructuring — which included work force reductions across our marketing, manufacturing, technology, and administrative staffs — is expected to generate annual cash savings of more than \$50 million. The restructuring also included the rationalizing of capacity at several manufacturing and research sites.

OUTLOOK: Careful financial management will help us achieve modest near-term earnings growth. Increased gross profit from seeds and traits will help to offset the projected declining contribution from *Roundup*. We're

in a transition phase as we expect our seeds and traits businesses to contribute a greater portion of Monsanto's gross profit in the near term.

An important 2003 goal is to sustain positive free cash flow driven by earnings. Our focus on cost and cash management is aimed at both maintaining the progress we've made and realizing the full earnings potential of our businesses. We'll provide adequate maintenance capital for our facilities while we maintain tight controls on capital spending.

GRAPH 4
Free cash flow growth exceeds target
dollars in millions



After reaching its goal of positive free cash flow in 2001, Monsanto exceeded its target for free cash flow growth in 2002. The major components of free cash flow are income, change in working capital, and capital spending. We increased free cash flow to \$639 million in 2002. Tight management of working capital and capital spending more than offset a reduction in cash provided from income.



"With Monsanto traits available in *DEKALB* and *Asgrow* corn, I can get the benefits of *Roundup Ready* and *YieldGard* traits in the high yielding hybrids I want."

Strong financial performance begins with strong products

In both 2001 and 2002, Monsanto brand corn seed delivered a yield advantage over competitive hybrids in key U.S. growing zones. In 2002, Monsanto brands gained two share points in the U.S. corn market. Todd Weller's family has been

planting *DEKALB* corn hybrids for more than 20 years. After Monsanto acquired both *DEKALB* and *Asgrow*, he began using *Asgrow* seeds as well. In 2002, a field that included both *DEKALB/ Roundup Ready* corn and *Asgrow/ YieldGard* corn produced by far the highest yield. Mr. Weller's family has ever seen on their farm.

Latin America

We took steps in Latin America that reduced sales and earnings in 2002 but stabilized our business position in this important agricultural market. The actions we took in Argentina and Brazil were designed to reduce risk and to balance earnings and cash during this particularly difficult economic period in these two countries.

We tightened credit policies in both countries, and we began to make most of our sales in Argentina for cash or grain. We chose to reduce distributor inventories of *Roundup* and seeds in the region. We also continued to move sales closer to the time farmers use the products. We cut costs by closing four seed production sites in Brazil and by reducing staff in both Brazil and Argentina. These steps reduced investments in working capital, improved management of receivables, and reduced our credit risk and other exposures in these countries.

In Argentina, a major currency devaluation early in 2002, along with increasing export taxes on grain through the first half of the year, greatly reduced our ability to collect on our receivables. So we established a \$154 million Argentine bad-debt reserve in the second quarter of 2002.

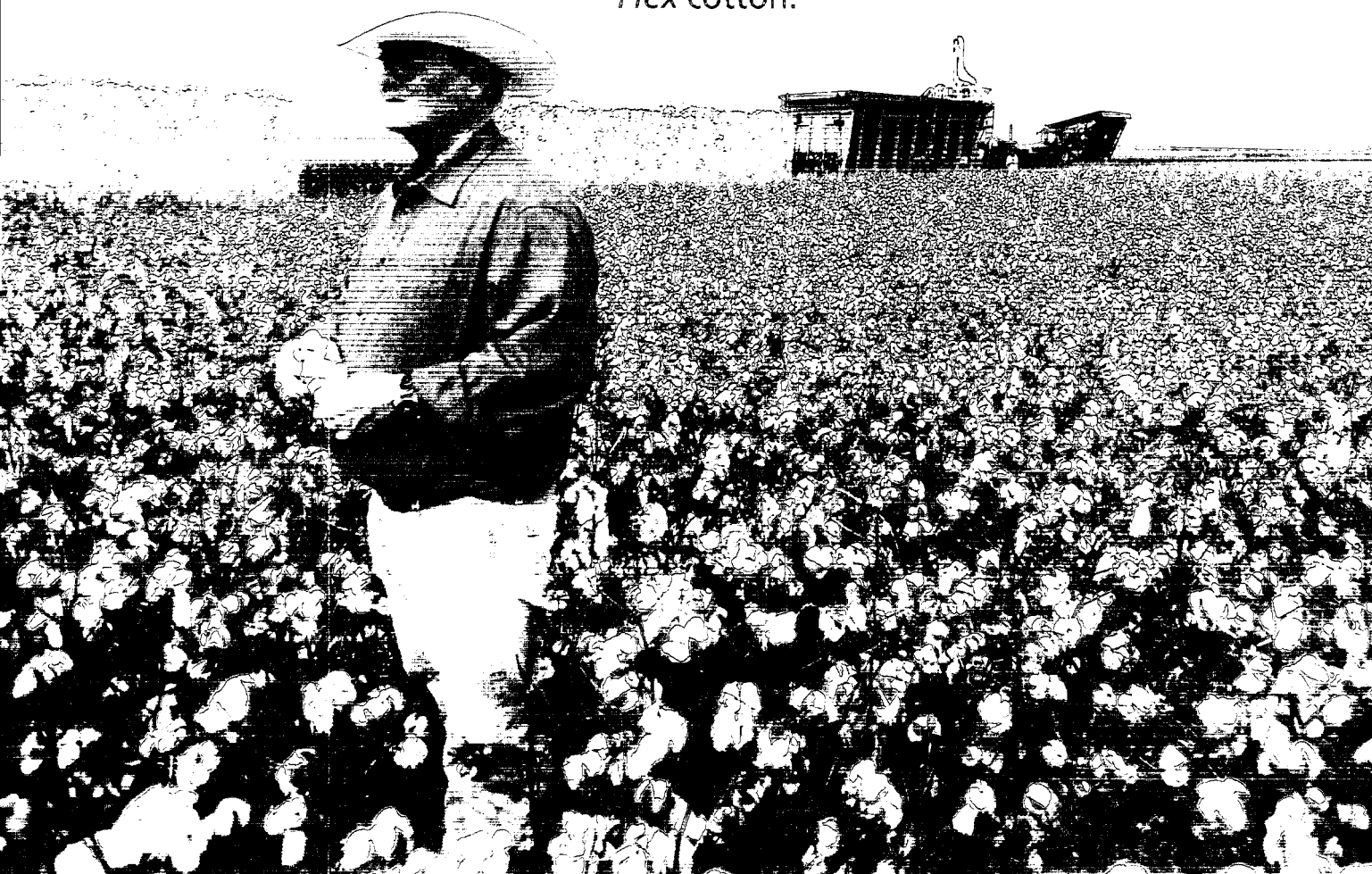
Lower overall sales and a higher level of cash-based sales, the bad-debt reserve, and better management of collections contributed to an overall reduction in receivables in Argentina and Brazil to \$528 million by the end of 2002, compared with more than \$1 billion a year earlier.

OUTLOOK: With the steps we've taken, we expect a modest recovery of our Latin American business in 2003.

We have a much-improved risk profile going into 2003, and our actions have not adversely affected our leadership in these key markets. We intend to keep distribution inventories at the lower levels reached in 2002. Our credit policies will remain tight.

MIKE GRIGG, COTTON FARMER, ACKERLY, TEXAS

"I get good weed control with *Roundup* on *Roundup Ready* cotton. I can hardly wait to get the new *Roundup Ready Flex* cotton."



Mike Grigg has seen positive results from Monsanto biotechnology traits. He uses *Roundup* for weed control. Mr. Grigg's crop, seen here just before harvest, is a stacked-trait cotton with *Roundup Ready* herbicide tolerance and *Bollgard* insect protection. In 2002, he used *Roundup* once to burn down weeds and twice during the growing season. He's looking forward to the new *Roundup Ready Flex* cotton, currently in development, that will allow farmers to spray *Roundup* over their crops during more of the growing season.

Technology leadership – the result of our unique investment in biotechnology and genomics – will drive long-term growth.

We're using our knowledge of plant genes to create products both through biotechnology and through conventional plant breeding.

Breeding and Biotechnology Research

Having compiled the largest genetic database in the agriculture industry, we're aggressively applying our knowledge to speed development of new products.

Monsanto research focuses on seeds and traits, the growth segment of our industry. Our R&D platforms lead the industry, accounting for:

- 30 percent of plant biotechnology U.S. patents filed by large agricultural companies through 2002,
- 42 percent of U.S. Department of Agriculture (USDA) field test applications since 1987,
- 52 percent of USDA biotechnology product approvals through 2002, and
- more than 90 percent of the acreage of biotechnology crops planted around the world in 2002.

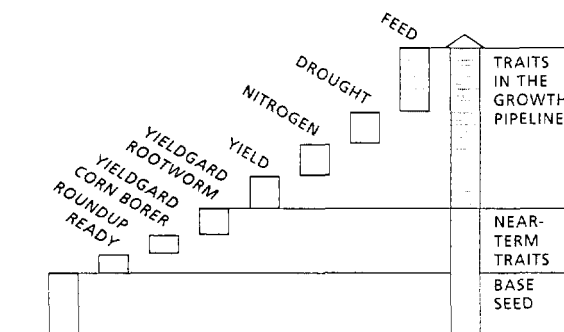
Our conventional breeding program is producing unprecedented yield gains. We expect the use of genetic markers to double those gains. Field trials in 2002 confirmed that marker-assisted breeding can double the historical rate of yield gains from conventional corn breeding. These gains support rapid improvement in our seed portfolio, which may help it exceed the strong sales gains and trait penetration achieved in recent years.

Currently, 35 percent of our U.S. corn breeding is marker-assisted, and we're expanding this capability to other crops. The cost per marker datapoint has declined by 70 percent and the number evaluated has increased 17-fold since 1998.

Monsanto is also developing ways to improve plants through biotechnology traits that can boost yields. Traits such as improved cold, heat and drought tolerance, disease resistance, and nitrogen efficiency are still in early phases of our R&D process. When commercialized, these and other traits are expected to increase significantly the productivity and sustainability of farming around the world (GRAPH 5).

GRAPH 5

Biotechnology traits will continue to add value estimated relative value per acre for corn



As we develop crop traits, the added value is shared by farmers, Monsanto, and our partners. Near- and medium-term growth in corn includes expansion of *Roundup Ready* and *YieldGard Corn Borer* traits and the introduction of *YieldGard Rootworm* corn. The corn pipeline includes traits that improve yield; traits that address specific environmental needs, such as nitrogen efficiency and drought tolerance; and traits that enhance feed value.

Renessen, our joint venture with Cargill Incorporated, was created in 1999 to develop and market products for the grain processing and animal feed industries. An improved-energy corn for better feed is currently in regulatory testing. Improved-oil soybeans for processing efficiency are in development.

OUTLOOK: Over the long term, in partnership with leading food companies, we're developing plants with traits that benefit consumers.

We're developing ways to improve crops to produce vegetable oils with less saturated fat, because saturated fat has been linked to cardiovascular disease.

We're also producing plants that may one day provide omega-3 fatty acids. Hundreds of studies confirm the cardiovascular health benefits of these nutrients, which are now found chiefly in fish. Biotechnology crops can become a renewable land-based source of omega-3, with a neutral taste that will allow many potential applications by food manufacturers.

Product Pipeline

In 2002, Monsanto launched *Bollgard* insect-protected cotton in India. This launch represented a major expansion of an existing biotechnology product. We continued to move other biotechnology products toward regulatory approval and launch, while longer-term products advanced through the R&D pipeline.

The product pipeline for seeds and traits appears below (GRAPH 6). Monsanto continues to develop improved formulations of *Roundup*. We will also maintain R&D projects in animal agriculture to improve swine genetics and dairy cow productivity.

OUTLOOK: Key product launches in 2003 are *YieldGard Rootworm* insect-protected corn in the United States, and *Bollgard II* cotton in the United States and Australia.

YieldGard Rootworm corn offers farmers better rootworm control, higher yields, and reduced exposure to insecticides. In 2001 and 2002 field trials, *YieldGard Rootworm* outperformed leading insecticides, resulting in an average yield increase of 7 percent. The projected 2003 U.S. launch will cover less than 1 million acres; the potential U.S. market is more than 30 million acres.

USDA field trials of *Bollgard II* cotton demonstrate that it performs better than *Bollgard*, controlling more target pests and reducing the number of insecticide applications. *Bollgard II* offers farmers an incremental savings in insecticide sprays of \$8 to \$12 per acre by controlling more targeted pests.

Monsanto is also developing three stacked-trait products for near-term launch: cotton with *Bollgard II* and *Roundup Ready* traits; *YieldGard Plus* corn, which has traits that provide protection against both the corn borer

GRAPH 6

Progress in the product pipeline

This chart describes our breeding and technology product development, which comprises more than 80 percent of Monsanto's R&D investment. We apply our integrated capabilities in genomics, biotechnology, and plant breeding to develop seeds with improved input and output traits. The pipeline includes biotechnology traits and improved germplasm that we use to produce new branded seed products and/or license to other seed companies.

		DISCOVERY	PHASE 1
Description		Gene/trait identification	Proof of concept
Key activities and milestones in each phase of product development		Conduct high-throughput screening of genetic database to identify valuable plant traits for conventional breeding or valuable genes that can be used to improve plants through biotechnology.	For conventional breeding, breed plants from parents with desired traits; for biotechnology products, test gene configurations in plants to screen for desired performance.
Average duration (1)		24 to 48 months	12 to 24 months
Average probability of success (2)		5 percent	25 percent
INPUT	Input trait candidates (3) Input traits provide value to farmers by increasing productivity and reducing costs.	○ Higher grain yield ○ Environmental stress tolerance ○ Insect control ○ <i>Roundup Ready</i>	○ Higher-yielding corn ○ Specialized corn ○ Higher-yielding soybeans
	Output trait candidates (3) Output traits provide consumer benefits and create value for manufacturers and processors.	○ Protein enhancements ○ Lipid enhancements ○ Carbohydrate enhancements ○ Bioactive compounds	○ Healthier oil II for food uses ○ Improved-energy corn III for feed (4)

and the corn rootworm; and *YieldGard Plus* corn that also has the *Roundup Ready* trait.

Our product pipeline also includes second-generation *Roundup Ready* cotton, which will be called *Roundup Ready Flex*. This product will give farmers more weed control options by allowing them to spray *Roundup* over their crop during more of the growing season. We expect this to be the first product of our genomics-based research to reach the market.

Applying genomics to plant breeding

Serena Gregory is a molecular biologist at a Monsanto lab in St. Louis. Here she tests corn samples taken from Monsanto's breeding program to determine the plants' genetic composition. Monsanto uses its genomics capabilities to test the genes of tens of

thousands of plant samples each year — and to take a lot of the guesswork out of plant breeding. Ms. Gregory focuses on genes associated with higher protein or oil content. She identifies corn plants that contain desirable genes that will allow Monsanto to develop new, higher-quality corn hybrids.



PHASE 2	PHASE 3	PHASE 4
Early product development For conventional breeding, conduct field trials of plants bred from parents with desired traits; for biotechnology products, conduct lab and field testing of genes in plants to select commercial product candidates, meet preregulatory requirements.	Advanced development Demonstrate performance of hybrid/variety developed through conventional breeding or efficacy of biotechnology trait in elite germplasm. Develop regulatory data as appropriate.	Final regulatory submission Produce bulk seed for potential sale, develop plans for commercialization/launch, respond to regulatory process as appropriate.
12 to 24 months	12 to 24 months	12 to 36 months
50 percent	75 percent	90 percent
○ <i>YieldGard II</i> insect-protected corn ○ Stacked <i>Roundup Ready</i> and insect-protected soybeans	○ Stacked <i>YieldGard Rootworm</i> corn with the <i>Roundup Ready</i> trait ○ <i>Roundup Ready Flex</i> cotton ○ <i>Roundup Ready</i> wheat ○ <i>Roundup Ready</i> hybrid canola	○ <i>YieldGard Rootworm</i> insect-protected corn ○ <i>Bollgard II</i> insect-protected cotton ○ Conservation tillage elite corn germplasm
○ Conventionally bred higher-yielding corn, soybeans and wheat (Phases 1 through 4)		
○ Healthier oil I for food uses ○ Improved-protein soybeans for food ○ Improved-protein soybeans for feed ⁽⁴⁾ ○ Improved-oil soybeans for processing ⁽⁴⁾	○ High-starch corn for ethanol ○ <i>Processor Preferred</i> elite germplasm for corn and oilseeds ○ Improved-energy corn II for feed ⁽⁴⁾	○ Improved-energy corn I for feed ⁽⁴⁾

(1) Time estimates are based on our experience; they can overlap. Total development time for any particular product can be shorter or longer than the estimated time periods shown here.

(2) This is the estimated average probability, based on our experience, for all product candidates in each phase, not just the candidates listed here. These probabilities may change over time.

(3) Candidates include research platforms in the discovery phase and specific product projects in phases 1 through 4 with higher-than-average probability of success and/or market potential based on available information and technical progress to date.

(4) These product candidates are in the Renessen pipeline. Renessen is a Monsanto/Cargill joint venture.

GLOSSARY

acetanilide

The active ingredient in a class of selective herbicides used predominantly in corn.

biotechnology

The science of using biological tools to meet specific needs, including genetic improvement of crops.

biotechnology crops

Crops improved with biological tools, usually genetic traits, that enhance their growth or provide nutritional or other benefits to farmers, food and feed processors, or consumers.

Bollgard insect-protected cotton

Cotton seed developed through biotechnology to protect the plant from several insect pests.

channeling

Systems to direct grain that may include biotechnology traits to markets where such traits have regulatory approval.

conservation tillage (con-till)

A farming practice that replaces removal of weeds by plowing; con-till involves the judicious use of herbicides to control weeds with minimal soil disturbance.

EBIT (earnings before interest and taxes)*

Net income (loss) before cumulative effect of accounting change, interest, and income taxes.

EBITDA (earnings before interest, taxes, depreciation, and amortization)*

EBIT, with the effects of depreciation and amortization also eliminated.

free cash flow**

The sum of cash flows from operations and investing activities.

genomics

The science and technology of studying and using the complement of genes in living organisms.

germplasm

Genetic material used to develop new seed varieties.

glyphosate

The active ingredient in *Roundup* herbicide.

marker-assisted breeding (MAB)

The use of molecular markers for genes instead of physical measurement of traits to manage plant breeding programs. MAB significantly reduces the time it takes to bring new varieties to market.

plant breeding

The process of cross-pollinating crop plants with desirable qualities to develop improved plants in successive generations.

Processor Preferred seeds

Soybean varieties introduced in 2001 and certified to contain high levels of oil and protein. These varieties are eligible for a premium price from processors; this category is being expanded to include corn hybrids for ethanol production.

Residue Proven seeds

Monsanto soybean varieties and corn hybrids that have been identified as particularly well suited for planting in the crop residue left on con-till fields.

Roundup

The world's leading nonselective herbicide brand, used predominantly to control weeds in agricultural settings.

Roundup Ready

A valuable trait that enables crops to tolerate Monsanto's *Roundup* herbicide.

science-based regulatory process

A review process for biotechnology products based on rigorous scientific studies and product safety testing.

stacked traits

More than one biotechnology trait in a single crop plant (for example, a cotton plant with both *Roundup Ready* and *Bollgard* traits).

Transorb II technology

A patented technology in *Roundup WeatherMAX* and other Monsanto herbicides that provides faster herbicide absorption. This gives farmers greater flexibility and better weed control.

trait

An important characteristic of a crop that is determined by a specific gene or set of genes.

YieldGard

Brand name for the Monsanto family of insect-protected traits in corn.

*See EBIT and EBITDA detail on pages 19-20.

**See free cash flow detail on page 29.

Financial Review

Selected Financial Data (Unaudited)	18
Management's Discussion and Analysis of Financial Condition and Results of Operations	19
Background	19
Financial Measures	19
Results of Operations	20
Agricultural Productivity Segment	23
Seeds and Genomics Segment	25
Restructuring and Other Special Items	27
Financial Condition, Liquidity, and Capital Resources	28
Outlook	30
Critical Accounting Policies and Estimates	32
New Accounting Standards	34
Market Risk Management	34
Cautionary Statements Regarding Forward-Looking Information	35
Shareowner Matters	38
Consolidated Financial Statements	39 - 42
Notes to Consolidated Financial Statements	43
Management Report	69
Independent Auditors' Report	69

Selected Financial Data (Unaudited)

(Dollars in millions, except per share and pro forma share amounts)	2002	2001	2000	1999	1998
Operating Results:					
Net sales ⁽¹⁾	\$ 4,673	\$ 5,462	\$ 5,493	\$ 5,248	\$ 4,448
Income from operations	319	659	567	610	55
Income (loss) before cumulative effect of accounting change	129	295	175	150	(125)
Cumulative effect of a change in accounting principle ^(1,2)	(1,822)	—	(26)	—	—
Net income (loss)	(1,693)	295	149	150	(125)
Pro forma net income (loss), assuming new accounting principle (SAB 101) is applied retroactively ⁽¹⁾	(1,693)	295	175	124	(125)
Diluted Earnings (Loss) per Share and per Pro Forma Share:⁽³⁾					
Income (loss) before cumulative effect of accounting change	\$ 0.49	\$ 1.12	\$ 0.68	\$ 0.58	\$ (0.48)
Net income (loss)	(6.45)	1.12	0.58	0.58	(0.48)
Pro forma net income (loss), assuming new accounting principle (SAB 101) is applied retroactively ⁽¹⁾	(6.45)	1.12	0.68	0.48	(0.48)
Year-End Financial Position:					
Total assets	\$ 8,890	\$11,429	\$11,726	\$11,101	\$10,891
Working capital ⁽⁴⁾	2,614	2,420	2,216	2,323	1,879
Current ratio ⁽⁴⁾	2.44:1	2.02:1	1.80:1	2.36:1	2.01:1
Long-term debt	851	893	962	4,278	4,388
Debt-to-capital ⁽⁵⁾	19%	19%	19%	48%	53%
Other Data (applicable for periods subsequent to IPO):⁽⁶⁾					
Dividends per share ⁽⁷⁾	\$ 0.48	\$ 0.48	\$ 0.09	N/A	N/A
Stock price per share:					
High	33.290	38.800	27.380	N/A	N/A
Low	13.010	26.875	19.750	N/A	N/A
Year-end	19.130	33.800	27.060	N/A	N/A
Shares outstanding (year-end, in millions)	261.4	258.1	258.0	N/A	N/A
Employees (year-end)	13,700	14,600	14,700	N/A	N/A

See "Management's Discussion and Analysis of Financial Condition and Results of Operations" for information regarding the factors that have affected or may affect our business results. The operating results data, earnings (loss) per share and per pro forma share data, and financial position data set forth above are derived from Monsanto Company's audited consolidated financial statements.

(1) In 2000, Monsanto adopted Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, the Securities and Exchange Commission interpretation of accounting guidelines on revenue recognition. Monsanto's adoption of SAB 101 primarily affected its recognition of license revenues from biotechnology traits sold through third-party seed companies. Monsanto adopted the provisions of SAB 101 as an accounting change, recognizing as a cumulative effect of a change in accounting principle a loss of \$26 million (\$0.10 per pro forma share), net of taxes of \$16 million, effective Jan. 1, 2000.

(2) In 2002, Monsanto adopted Statement of Financial Accounting Standards (SFAS) No. 142, *Goodwill and Other Intangible Assets*. In connection with the adoption of this new accounting standard, Monsanto recognized a transitional goodwill impairment charge of \$1.8 billion aftertax (\$6.94 per share).

(3) Diluted earnings per share for 2002 and 2001 take into account the effect of dilutive common share equivalents (1.9 million shares and 5.5 million shares, respectively). Diluted earnings per pro forma share for 2000 were calculated using 258 million weighted-average common shares outstanding plus the effect of dilutive common share equivalents totaling 0.5 million, consisting of outstanding stock options. For all periods prior to 2000, diluted earnings per pro forma share were calculated using 258 million weighted-average common shares, the number of common shares outstanding immediately after the initial public offering (IPO) in October 2000.

(4) Working capital is total current assets less total current liabilities; current ratio represents total current assets divided by total current liabilities.

(5) Debt-to-capital is the total of short-term and long-term debt, divided by the sum of short-term and long-term debt and shareowners' equity.

(6) Prior to Sept. 1, 2000, Monsanto was the agricultural business of Pharmacia Corporation and was not a separate corporate entity with shares outstanding or employees.

(7) The dividend of \$0.09 per share on the company's common stock declared in the fourth quarter of 2000 is prorated. It is based on a quarterly dividend rate of \$0.12 per share, which reflects a policy adopted by the board of directors following Monsanto's IPO.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Background

Monsanto Company is a leading global provider of agricultural products and integrated solutions for farmers. We make *Roundup* herbicide and other herbicides. We produce leading seed brands, including *DEKALB* and *Asgrow*, and we provide farmers and other seed companies with biotechnology traits for insect protection and herbicide tolerance. Our herbicides, seeds, and related biotechnology trait products can be combined to provide growers with integrated solutions that improve productivity and reduce the costs of farming. We also provide lawn-and-garden herbicide products for the residential market and animal agricultural products focused on improving dairy cow productivity and swine genetics.

We manage our business in two segments: Agricultural Productivity, and Seeds and Genomics. The Agricultural Productivity segment consists of the crop protection products, animal agriculture, lawn-and-garden herbicide products, and environmental technologies businesses. The Seeds and Genomics segment consists of the global seeds and related traits businesses, and genetic technology platforms.

Monsanto comprises the operations, assets and liabilities that were previously the agricultural business of Pharmacia Corporation (Pharmacia). Monsanto was originally incorporated in February 2000 as a subsidiary of Pharmacia. On Sept. 1, 2000, the assets and liabilities of the agricultural business were transferred from Pharmacia to Monsanto, pursuant to the terms of a separation agreement dated as of that date. The consolidated financial statements for all periods prior to Sept. 1, 2000, were prepared on a carve-out basis to reflect the historical operating results, assets, liabilities, and cash flows of the agricultural business operations. The costs of certain services and debt service provided by Pharmacia included in the Statement of Consolidated Operations for these periods were allocated to Monsanto based on methodologies that management believes to be reasonable, but which do not necessarily reflect what the results of operations, financial position, or cash flows would have been had Monsanto actually been a separate, stand-alone entity before Sept. 1, 2000.

Beginning Sept. 1, 2000, the consolidated financial statements reflect the results of operations, financial position, and cash flows of the company as a separate entity responsible for procuring or providing the services and financing previously provided by Pharmacia. The consolidated financial statements also include the costs of services purchased from Pharmacia and the reimbursement for services provided to Pharmacia pursuant to a transition services agreement.

In October 2000, Monsanto sold approximately 15 percent of its common stock at \$20 per share in an initial public offering (IPO). On Aug. 13, 2002, Pharmacia completed a spinoff of Monsanto by distributing its entire ownership interest via a tax-free dividend to Pharmacia's shareowners.

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) should be read in conjunction with Monsanto's consolidated financial statements and the accompanying notes. Unless otherwise indicated, "Monsanto" and "the company," and references to "we," "our" and "us," are used interchangeably to refer to Monsanto Company or to Monsanto Company and consolidated subsidiaries, as appropriate to the context. With respect to time periods before the separation of Monsanto's businesses from those of Pharmacia on Sept. 1, 2000, references to "Monsanto" or "the company" also refer to the agricultural business of Pharmacia. Unless otherwise indicated, "earnings (loss) per share" and "per share" mean diluted earnings (loss) per share; "earnings (loss) per pro forma share" and "per pro forma share" mean basic and diluted earnings (loss) per pro forma share. In the tables, all dollar amounts are expressed in millions, except per share and per pro forma share amounts. Unless otherwise indicated, references to "*Roundup* herbicides" mean *Roundup* branded and other branded glyphosate-based herbicides, excluding all lawn-and-garden herbicides; references to "*Roundup* and other glyphosate-based herbicides" mean both branded and nonbranded glyphosate-based herbicides, excluding all lawn-and-garden herbicide products.

Financial Measures

The primary operating performance measure for our two business segments is earnings (loss) before cumulative effect of accounting change, interest, and income taxes (EBIT). We use EBIT as a measure of segment profitability in accordance with Statement of Financial Accounting Standards (SFAS) No. 131, *Disclosures about Segments of an Enterprise*, to allocate resources and evaluate performance. EBIT is a useful measure as it demonstrates the operational profitability of a segment.

In addition, management believes that earnings (loss) before cumulative effect of accounting change, interest, income taxes, depreciation, and amortization (EBITDA) is an appropriate measure for evaluating the operating performance of our businesses. Our seed company acquisitions in 1998 and 1997 affected results by substantially increasing amortization expense associated with intangible assets. EBIT for 2000 and 2001 included amortization expense related to goodwill and other intangible assets, a majority of which related to these seed company acquisitions. However,

since we adopted SFAS No. 142, *Goodwill and Other Intangible Assets*, on Jan. 1, 2002, we no longer amortize goodwill. (See "New Accounting Standards" in MD&A for further details.) This means that EBIT for 2002 reflects only amortization related to intangible assets other than goodwill; EBIT for 2002 is therefore not comparable to EBIT for prior years. Because EBITDA eliminates the effects of amortization of intangible assets, management believes that it provides helpful information to investors.

Free cash flow represents the total of cash flows provided by operations and required by investing activities. Free cash flow is a measure of the cash generating capacity of a company which can be returned to shareholders through a dividend payment or share repurchases, or to debt holders in the form of principal repayments. Free cash flow can also be reinvested into the company.

The presentation of EBIT, EBITDA, and free cash flow is intended to supplement investors' understanding of our operating performance. Our EBIT, EBITDA, and free cash flow measures may not be comparable to other companies' EBIT, EBITDA, and free cash flow performance measures. Furthermore, these measures are not intended to replace net income (loss), cash flows, financial position, or comprehensive income (loss), as determined in accordance with accounting principles generally accepted in the United States.

Results of Operations

Year Ended Dec. 31,	2002	2001	2000
Net Sales	\$4,673	\$5,462	\$5,493
Income before cumulative effect of accounting change	129	295	175
Add: Interest expense — net	59	73	184
Income tax provision	73	164	159
EBIT ⁽¹⁾	261	532	518
Add: Depreciation	329	311	270
Amortization	131	239	276
EBITDA ⁽²⁾	\$ 721	\$1,082	\$1,064

Diluted earnings per share (per pro forma share in 2000):

Income before cumulative effect of accounting change	\$ 0.49	\$ 1.12	\$ 0.68
--	---------	---------	---------

(1) Earnings before cumulative effect of accounting change, interest, and income taxes.

(2) Earnings before cumulative effect of accounting change, interest, income taxes, depreciation, and amortization.

Overview of Financial Performance

We recognized a net loss of \$1.7 billion, or \$6.45 per share, in 2002. In 2001, we recognized net income of \$295 million, or \$1.12 per share. The following factors affect the year-to-year comparison:

- A \$1.8 billion aftertax (\$6.94 per share) goodwill impairment upon adoption of SFAS 142, which was recorded as of Jan. 1, 2002, as a cumulative effect of a change in accounting principle (see "New Accounting Standards" in MD&A)
- Lower 2002 volumes and prices of *Roundup* herbicides, particularly in the United States and Latin America

- Difficult economic conditions in Latin America (including the economic crisis in Argentina) and the operational changes to address the economic and market uncertainties there in 2002
- Establishment of a \$154 million pretax (\$100 million aftertax) bad-debt reserve in the second quarter of 2002 related to Argentine receivables
- Higher-than-anticipated Latin American corn seed returns in 2001, primarily in Brazil, which affected net sales by approximately \$120 million
- Strong U.S. sales of our *DEKALB* and *Asgrow* corn seed brands in 2002, as well as our corn technology traits
- Approximately \$90 million increase in net income (\$0.34 per share) in 2001, resulting from a timing change in revenue recognition (caused by a switch to a royalty payments system for our licensed corn and soybean traits)
- Absence of goodwill amortization in 2002, as a result of adopting SFAS 142 — this affected the net income comparison by approximately \$106 million (\$0.40 per share)
- Three separate legal matters, resulting in a net charge of \$60 million pretax (\$39 million aftertax) in 2001
- Gain from sales of certain assets for use in certain ex-U.S. markets in 2002, which contributed approximately \$20 million of other income

Net sales declined 14 percent to \$4.7 billion in 2002 from \$5.5 billion in 2001. Sales declined in both the Agricultural Productivity segment and, to a lesser extent, the Seeds and Genomics segment. In the Agricultural Productivity segment, continued competitive pressures on *Roundup* resulted in U.S. market share loss, and unfavorable weather conditions in key planting regions contributed to lower U.S. sales of *Roundup*. The effect of a shift in mix to lower-priced glyphosate products also lowered U.S. sales of *Roundup* by decreasing the average net selling price. The Seeds and Genomics segment experienced higher seed sales in the United States. Higher corn seed sales were partly offset by lower soybean sales. Trait revenues in the United States increased in 2002, even though 2001 results included trait sales for more than one season because of our switch in 2001 to a royalty payment system for licensed traits in corn and soybeans.

Both segments were affected by economic conditions in Latin America (including the economic crisis that began in Argentina at the end of 2001), by operational changes we made to our business model to address the continued economic uncertainty and unfavorable market conditions there, and by the actions we are taking in conjunction with our customers in Argentina. Although these actions significantly affected EBIT through lower sales in Latin America and higher product returns in Argentina, they are intended to reduce investments in working capital and our credit risk and other exposures in Argentina and Brazil. Currency losses in Argentina also affected EBIT in 2002 and, to a lesser extent, in 2001. In 2001, higher-than-anticipated returns of corn seed in Latin America — primarily in Brazil — negatively affected sales by approximately \$120 million and earnings per share by approximately \$0.20 per share. For a more detailed discussion of these and other factors affecting net sales in 2001 and 2002, see "Agricultural Productivity Segment" and "Seeds and Genomics Segment."

Cost of goods sold declined 12 percent to \$2.5 billion for 2002, reflective of lower sales. Excluding costs related to our restructuring plans, we were able to keep the unit manufacturing costs of *Roundup* and other glyphosate-based herbicides flat, despite lower *Roundup* production volumes, which led to unfavorable cost of goods sold manufacturing variances. These costs were offset by cost management efforts and lower raw material and energy prices. Lower seed inventory costs in the United States were offset by higher seed obsolescence in Latin America. The combination of the aforementioned net sales and cost of goods sold factors resulted in an 18 percent decline in gross profit. As a percent of sales, gross profit declined one point. The gross profit effect of lower *Roundup* average net selling prices was slightly mitigated by increased sales of higher-margin seed traits.

Operating expenses in 2002 declined 6 percent from 2001, as a significant increase in Argentine bad-debt expense was offset by the benefit of no longer amortizing goodwill, and by a decline in our selling, general and administrative (SG&A) expenses. SG&A expenses for 2002 declined 10 percent from 2001. We have achieved these lower spending levels through our continued emphasis on cost management. SG&A expenses also reflect lower employee incentives and other employee-related costs, and an approximate \$25 million reduction of costs stemming from our agreement to sell certain Monsanto herbicide assets to Nissan Chemical Industries, Ltd. (Nissan).

In 2002, we recorded \$208 million of bad-debt expense, the majority of which relates to estimated uncollectible trade receivables in Argentina. The allowance for doubtful trade receivables was increased by \$154 million in the second quarter because of the economic turmoil and market conditions in that country. For further discussion of the economic conditions in Argentina and the effect on our business, see "Outlook." The remaining bad-debt expense in 2002 was in line with our historical experience.

Research and development (R&D) expenses in 2002 decreased 6 percent from 2001, as we continued to focus our spending on seed breeding, plant biotechnology and genomics. The restructuring of our early genomics programs also contributed to the savings.

Operating results in 2002 included the positive effect of SFAS 142, the new accounting standard related to the amortization of goodwill. Since we adopted SFAS 142 on Jan. 1, 2002, we no longer amortize goodwill. In comparison, we recorded \$121 million of amortization and adjustments of goodwill in 2001.

Both 2002 and 2001 include charges relating to our restructuring plans. Results in 2002 include charges for our 2002 restructuring plan, and 2001 results include charges for our 2000 restructuring plan. Net pretax charges (including those recorded within cost of goods sold) related to our restructuring plans were \$124 million in 2002, and \$213 million in 2001. For further details on both plans, see "Restructuring and Other Special Items" in MD&A.

Interest expense, net of interest income and capitalized interest, declined \$14 million in 2002. We benefited from lower commercial paper interest rates during most of the year, as well as lower average borrowing levels. These benefits were partially offset by higher interest rates associated with our long-term senior notes issued in

August 2002. In 2001, higher interest capitalized on construction (\$30 million in 2001 versus \$8 million in 2002) reduced net interest expense. A majority of this capitalized interest was associated with the construction of our Camaçari, Brazil, facility, which was completed in late 2001.

Other expense (net) in 2002 decreased significantly from other expense (net) in 2001. In both periods, other expense included equity affiliate expense of \$41 million associated with our Renessen LLC (Renessen) joint venture. This joint venture is 50-50 owned and funded with Cargill Incorporated (Cargill) and was formed to develop and market products for the grain processing and animal feed industries. Both 2001 and 2002 included gains realized upon the sale of equity securities (approximately \$10 million in both years). On a year-to-year comparison, other expense (net) was affected by a number of items.

In 2002, these factors included the following:

- Currency losses were slightly higher than those in 2001, as the further devaluation of our net assets denominated in Argentine pesos was partially offset by currency gains in Brazil.
- We recorded approximately \$20 million of other income related to sales of certain herbicide assets for use in ex-U.S. markets, including the Nissan transaction in Japan and a smaller transaction with Nufarm Australia Ltd. (Nufarm) related to the Australian and New Zealand markets.
- We recorded other expense related to litigation matters, including an agreement among Monsanto and certain subsidiaries, E.I. du Pont de Nemours (DuPont) and DuPont's Pioneer Hi-Bred International Inc. (Pioneer) subsidiary. This resolved a number of business and patent disputes among the parties, and also included new royalty and business arrangements, including the granting of technology licenses.

In 2001, we recognized:

- The effects of three separate legal matters, which resulted in a net pretax charge of \$60 million (see "Review of 2001" for further details)
- Other income totaling \$8 million from a deferred payout provision related to a past business divestiture
- The impairment of an equity investment (\$8 million)
- A \$4 million loss related to the early extinguishment of Employee Stock Ownership Plan (ESOP) debt (see "New Accounting Standards" in MD&A for information on the prior classification of this item)

Income taxes in 2002 decreased significantly from 2001, though the effective tax rate remained unchanged at 36 percent. The decline in income taxes is consistent with the lower pretax income in 2002. The absence of goodwill amortization had a favorable effect on the effective tax rate in 2002 because the majority of our historical goodwill amortization was not deductible for tax purposes. This improvement was offset by higher tax expense in certain ex-U.S. jurisdictions, particularly in Latin America, and an increase in the relative cost of state income taxes.

Review of 2001

Net sales for 2001 were \$5.5 billion, down 1 percent from 2000 sales. The effects of exchange rates for foreign currency, particularly the Brazilian real and to a lesser extent the Japanese yen and the euro, unfavorably affected sales by 3 percent. Increased sales in the Seeds and Genomics segment were more than offset by an overall decline in sales in the Agricultural Productivity segment. Seeds and Genomics net sales in 2001 benefited from higher biotechnology trait revenues, and from our Latin American grain sales program, while higher-than-anticipated conventional corn seed returns in Latin America (primarily in Brazil) reduced sales. The increased trait revenues were attributable primarily to a shift in timing, as our decision to change trait fees from a technology fee system to a royalty system shifted certain trait revenues from the first half of 2002 to the last half of 2001. This new structure contributed approximately \$90 million, or \$0.34 per share, to 2001 net income. See "Seeds and Genomics Net Sales for 2001" in MD&A for further details. The higher trait revenues also reflected a royalty payment related to the resolution of issues regarding our *YieldGard* insect-protected corn trait, the effects of a higher royalty rate for *Roundup Ready* soybeans, and the increased demand for our biotechnology traits. In the Agricultural Productivity segment, our animal agriculture and lawn-and-garden products businesses delivered sales increases. But these increases were more than offset by lower sales of *Roundup* and other glyphosate herbicides. Continued growth of *Roundup Ready* crops and further expansion of conservation tillage practices drove up sales volumes of *Roundup* and other glyphosate-based herbicides, but the effects of lower average selling prices resulted in lower revenues.

Cost of goods sold in 2001 increased 2 percent, to \$2.8 billion, from cost of goods sold in 2000. Higher sales volumes of glyphosate contributed to this increase, as did start-up expenses in 2001 associated with our new manufacturing facility in Camaçari, Brazil. Our investments in improved technologies were part of our plan to increase overall glyphosate production capacity and to operate more cost effectively. Both years included charges to cost of goods sold related to our restructuring plan to focus on key crops and to streamline certain of our glyphosate manufacturing facilities. Excluding the costs related to our restructuring plan, we reduced unit manufacturing costs of *Roundup* and other glyphosate-based herbicides by 3 percent.

Gross profit declined 3 percent, to \$2.6 billion. An increase in high-margin trait revenues was more than offset by the negative effects of corn seed returns in Latin America and an overall decline in net selling prices of *Roundup* herbicides. As a result, gross profit as a percent of sales declined one point from 2000 to 2001.

As a stand-alone company focused solely on agriculture, we took steps to make worldwide operations more focused, productive, and cost-efficient. SG&A expenses decreased approximately 5 percent to \$1.1 billion in 2001. This decline was attributable to our continued cost management efforts and the absence of amortization expense related to certain assets that became fully amortized during 2000, and lower employee-related expenses. R&D expenses decreased 5 percent, to \$560 million for 2001 from \$588 million for 2000. Our reduced R&D spending reflected our actions to focus on our key crops and to eliminate certain research projects.

As a percent of net sales, both SG&A and R&D expenses improved when compared with 2000 percentages: SG&A expenses declined to 20.9 percent from 21.8 percent, and R&D declined to 10.3 percent from 10.7 percent.

Amortization and adjustments of goodwill declined 43 percent to \$121 million in 2001, compared with \$212 million in 2000. In 2000, we wrote down \$88 million of goodwill, primarily associated with a decision to terminate certain nutrition programs. Excluding this write-down, amortization was relatively unchanged in a year-over-year comparison.

Both 2001 and 2000 included restructuring and other special items related to our 2000 restructuring plan to focus on certain key crops and to streamline operations. Total charges to the plan were \$474 million, with \$213 million recorded in 2001 and \$261 million recorded in 2000. See "Restructuring and Other Special Items" in MD&A for further details.

Net interest expense in 2001 decreased 60 percent, to \$73 million from \$184 million in the prior year. This decrease largely reflected the \$2.9 billion debt reduction that resulted from our separation from Pharmacia and our IPO in 2000. We also benefited from lower interest rates during 2001, as our borrowings were primarily in commercial paper.

A number of factors affected other expense (net) in 2001. It increased substantially to \$127 million, compared with \$49 million in 2000.

Three separate legal matters affected other expense in 2001, resulting in a net charge of \$60 million:

- Monsanto and Central Garden and Pet (Central Garden) announced in January 2002 settlement of all litigation related to Central Garden's distributorship of lawn-and-garden products during the 1990s for a divested business of the former Monsanto. As a result, we recorded a net pretax charge of \$32 million to other expense (net), in our 2001 financial statements. Central Garden has paid Monsanto \$5.5 million for products shipped to Central Garden under the distribution agreement, and Central Garden's Pennington subsidiary also agreed to purchase \$2 million of Monsanto's glyphosate material under an existing supply agreement with Monsanto.
- In November 2001, a U.S. federal appeals court upheld a 1999 judgment against DEKALB Genetics Corporation (DEKALB Genetics), now a wholly owned subsidiary of Monsanto, in a licensing dispute brought by Aventis CropScience S.A. (Aventis). We established a \$50 million pretax reserve related to a verdict for punitive damages, which was paid in 2002.
- In October 2001, Monsanto and DuPont announced the resolution of issues related to Monsanto's MON810 *YieldGard* insect-protected corn trait used in corn hybrids sold by Pioneer. The resolution includes the dismissal of several lawsuits regarding the development, licensing and sale of MON810 *YieldGard* products. Under this agreement, Pioneer will continue to sell MON810 *YieldGard* insect-protected corn hybrids under a royalty-bearing license from Monsanto. In addition, Monsanto received a one-time fee of approximately \$56 million. The major components of this fee relate to Pioneer's past use of Monsanto's MON810 *YieldGard* product, and royalties related to Pioneer's sales of MON810 *YieldGard* products during 2001.

The portion of the fee related to Pioneer's past use of the product and settlement of other issues (\$22 million) was recorded as a reduction to other expense (net) in 2001. Royalties related to MON810 *YieldGard* products sold during 2001 were recorded as trait revenues in the fourth quarter of 2001.

In addition to these legal matters, we recognized \$15 million of other expense in 2001 to reflect the devaluation of the Argentine peso. Other expense in 2001 also included a loss of \$4 million related to the early retirement of ESOP debt. Other expense in 2001 also included impairments of equity investments; other expense in 2000 reflected a write-down of an investment in marketable equity securities. Equity affiliate expense in 2001 related to our Renessen joint venture increased approximately \$10 million from equity affiliate expense in the prior year. The effects of these higher expenses were slightly offset in 2001 by other income from a deferred payout provision related to a past business divestiture and gains on the sale of equity securities.

Pretax income increased approximately 37 percent, or \$125 million, in 2001 primarily because of reduced operating expenses and lower interest expense during the year. The absence of the \$88 million goodwill write-down in 2000 also contributed to the higher pretax income in 2001. The effective tax rate decreased to 36 percent from 48 percent in the prior year, primarily because the aforementioned write-down of goodwill in 2000 was not deductible. See "Restructuring and Other Special Items" in MD&A for further details. Improved expectations of the recovery of certain Brazilian deferred tax assets also contributed to the lower effective tax rate in 2001. See Note 10 — Income Taxes — to the consolidated financial statements for further details.

Net income totaled \$295 million, or \$1.12 per share, for the year ended Dec. 31, 2001, compared with \$149 million, or \$0.58 per pro forma share, for 2000. Results in 2000 included a cumulative effect of accounting change of \$26 million aftertax, or \$0.10 per pro forma share. This cumulative effect of accounting change resulted from our adoption of Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, the U.S. Securities and Exchange Commission (SEC) interpretation of accounting guidelines on revenue recognition. Our adoption of SAB 101 in 2000 primarily affected recognition of license revenues from biotechnology traits sold through competitor seed companies. We restated license revenues in 2000 to be recognized when a grower purchases seed as compared with the previous practice of recognizing the license revenue when the third-party seed company sold the seed into the distribution system. As a result, no license revenues from biotechnology traits sold by third-party seed companies were recognized in the fourth quarter of 2000. As required by the provisions of SAB 101, we adopted its provisions as an accounting change recognizing the cumulative effect of a change in accounting principle as a loss of \$26 million, net of taxes of \$16 million, effective Jan. 1, 2000.

Agricultural Productivity Segment

The Agricultural Productivity segment consists of our crop protection products (*Roundup* and other glyphosate-based herbicides and selective chemistries) and our animal agriculture, lawn-and-garden herbicides, and environmental technologies businesses. We are a leading worldwide developer, producer and marketer of crop protection products, including *Roundup* herbicide.

Year Ended Dec. 31,	2002	2001	2000
Net Sales			
<i>Roundup</i> and other glyphosate-based herbicides	\$1,844	\$2,422	\$2,625
All other agricultural productivity products	1,244	1,333	1,260
Total Net Sales	\$3,088	\$3,755	\$3,885
Gross Profit			
<i>Roundup</i> and other glyphosate-based herbicides	\$ 823	\$1,234	\$1,433
All other agricultural productivity products	519	542	561
Total Gross Profit	\$1,342	\$1,776	\$1,994

Agricultural Productivity Net Sales for 2002

The 2002 decline in Agricultural Productivity segment net sales is largely attributable to lower sales of *Roundup* and other glyphosate-based herbicides. Lower sales of these products was driven by a decline in both volumes and average net selling prices, with the largest declines in the United States and Argentina.

In the United States, 2002 net sales of *Roundup* and other glyphosate-based herbicides were down 24 percent from 2001 net sales. Market share loss because of continued competitive pressures in the burndown market, and to a lesser extent the over-the-top market, contributed to the lower volumes. In addition, adverse weather conditions in the second and third quarters of 2002 reduced the amount of glyphosate used in the over-the-top, fallow, and postharvest markets. As a result, the overall growth of the U.S. market was lower than expected, with sales volumes of *Roundup* in the United States declining 17 percent. In 2002, average net selling prices of branded *Roundup* in the United States declined approximately 11 percent from 2001 average net selling prices. The lower average net selling prices include the effect of continued competitive pressures and a shift in mix to lower-priced glyphosate products. Year-end distribution inventory levels of *Roundup* in the United States were roughly flat when compared with 2001 year-end levels. In 2002, we successfully began the launch of *Roundup WeatherMAX*, a new high-performance formulation of *Roundup* that provides consistent weed control in a variety of less-than-ideal weather conditions.

Poor economic conditions and the operational decisions we made to reduce our risk of doing business in Latin America negatively affected the sales of *Roundup* in 2002. These operational changes included working with our customers in Argentina to maintain our long-term customer relationships, thereby reducing risks for both parties. Because of the economic conditions in Argentina brought on by the economic crisis that began late in 2001 and continued into 2002, we allowed some crop protection product returns on a case-by-case basis. This one-time exception to our policy regarding crop protection product returns reduced sales

of *Roundup* and other glyphosate-based herbicides by approximately \$60 million in 2002. *Roundup* sales in Brazil declined as well, as distribution inventory levels decreased in that country. In Latin America, we intend to keep our distribution inventories at the lower levels achieved in 2002. In Asia, competitive pricing of generic products decreased sales early in the year. In addition, sales in Asia declined for the year as a result of the agreement mid-year to sell certain of our herbicide assets to Nissan for use in Japanese markets.

Overall sales of our other agricultural productivity businesses declined, though sales in our lawn-and-garden herbicides and animal agriculture businesses increased. Sales of our U.S. acetanilide products declined because of the adverse weather conditions discussed above and competitive conditions. Sales in our environmental technologies business also declined because of unfavorable industry conditions. These declines were slightly mitigated by growth in our animal agriculture business, which was led by an 8 percent increase in sales volumes of *Posilac* bovine somatotropin. The lawn-and-garden herbicide business delivered strong sales growth, resulting from growth in the market and market share gains driven by new product introductions and stronger advertising.

Agricultural Productivity Net Sales for 2001

In the Agricultural Productivity segment, net sales decreased 3 percent to \$3.8 billion in 2001, from \$3.9 billion in 2000. Lower herbicide sales offset higher sales from other agricultural productivity businesses, including lawn-and-garden products and animal agriculture.

Worldwide net sales of our *Roundup* and other glyphosate-based herbicides of \$2.4 billion in 2001 declined 8 percent from 2000 net sales of \$2.6 billion. Sales volumes of these products grew 2 percent, with *Roundup* volumes relatively unchanged and volumes of glyphosate that we manufacture and supply to third parties up 9 percent. The United States and Latin America posted volume gains on the growth of *Roundup Ready* acres, and the adoption of conservation tillage practices increased in major world areas. However, major flooding and economic uncertainty in Argentina negatively affected volumes, as did adverse weather conditions in Australia and Canada. In certain world areas (Brazil and the United States, in particular), market conditions had increased distribution channel inventories. The effect of generic competition in certain ex-U.S. markets brought sales prices of *Roundup* down. The effects of currency fluctuations in Brazil and Asia also unfavorably affected sales prices. Excluding the effects of currency fluctuations, worldwide prices of *Roundup* and other glyphosate-based herbicides declined nearly 6 percent.

Sales volumes of *Roundup* in the United States increased 9 percent during our first full year without patent protection, while a decline in the prices of these products, driven primarily by the mix of products sold, resulted in an overall decline in net sales. In addition to *Roundup Ready* acres and conservation tillage growth, expanded distribution of higher-value *Roundup UltraMAX* and successful introductions of unique formulations of *Roundup* (such as *RT Master*) contributed to the U.S. volume increase.

Net sales of our other Agricultural Productivity products totaled \$1.3 billion, a 6 percent increase from net sales in 2000. The lawn-and-garden business delivered a strong sales performance, driven by volume growth. Our animal agriculture business

also contributed to the growth, led by an increase in sales of *Posilac* bovine somatotropin. Results in 2001 also benefited from the inclusion of sales from a previously unconsolidated investment, which was consolidated during the first half of 2000, when we acquired a controlling interest. This business supplies a key raw material for the manufacture of our herbicides, including *Roundup*, but also has third-party sales. Global sales of acetanilide and other selective herbicides were lower in 2001, primarily because of adverse weather conditions in Argentina and Canada.

Agricultural Productivity EBIT and EBITDA

Year Ended Dec. 31,	2002	2001	2000
EBIT ⁽¹⁾	\$366	\$772	\$1,099
Add: Depreciation	234	220	205
Amortization	3	5	4
EBITDA ⁽²⁾	\$603	\$997	\$1,308

(1) Earnings before cumulative effect of accounting change, interest, and income taxes.

(2) Earnings before cumulative effect of accounting change, interest, income taxes, depreciation, and amortization.

EBIT for 2002

The factors discussed in the 2002 net sales review above led to an overall decline in EBIT for the segment in 2002, with the most notable effects coming from declines in the United States and Latin America. Continued competitive pressures on *Roundup* herbicide and unfavorable weather conditions were the primary drivers for the EBIT decline in the United States. In Latin America, market and economic conditions led us to take steps, some in connection with our customers, to reduce the risk of doing business in that region. Lower production volumes of *Roundup* led to unfavorable cost of goods sold manufacturing volume variances, but these costs were offset by cost-management efforts and lower prices for raw materials and energy. Segment EBIT was negatively affected by the increase in bad-debt expense relating to estimated uncollectible accounts receivable in Argentina. Our environmental technologies business also experienced an EBIT decline. Lower operating expenses slightly mitigated these margin shortfalls. The sales of certain herbicide assets to Nissan and Nufarm for use in Asia-Pacific markets contributed to EBIT through reduced SG&A expenses and other income. These EBIT gains were partially offset by lower herbicide sales in Asia. SG&A expenses also declined because of continued cost management and lower employee-related expenses. In addition, our R&D spending was lower in 2002, as we continued to focus our spending. Our animal agriculture and lawn-and-garden herbicides businesses experienced continued EBIT growth. Manufacturing efficiencies in our *Posilac* business allowed us to reduce cost of goods sold for that business, even while animal agriculture sales increased.

EBIT for 2001

EBIT for the Agricultural Productivity segment declined 30 percent to \$772 million in 2001, compared with \$1.1 billion in 2000. This decrease was because of lower gross profit and a higher level of restructuring and special items in 2001 than in 2000. Gross profit for the segment declined approximately 11 percent, and gross profit as a percent of sales declined 4 percentage points. Lower *Roundup* prices, including the effects of foreign currency exchange

rates and mix of products sold, were the primary contributors to this decline. In addition, 2001 results included sales and cost of goods sold related to the previously unconsolidated investment discussed above. Although we reduced glyphosate unit manufacturing costs in 2001, gross profit was adversely affected by our actions to streamline manufacturing facilities. Strong performances from our lawn-and-garden herbicide and animal agriculture businesses slightly offset these declines. EBIT improvement for the animal agriculture business can be attributed to increased sales of *Posilac* bovine somatotropin and more efficient manufacturing performance. Operating expenses declined 1 percent, partially attributable to lower employee-related costs. Operating expenses as a percent of sales increased by one percentage point, primarily because of lower sales. Other expense (net) increased by approximately \$50 million, as a result of the Central Garden litigation settlement and the devaluation of the Argentine peso.

Our Agreement with The Scotts Company

In 1998, Monsanto entered into an agency and marketing agreement with The Scotts Company (Scotts) with respect to our lawn-and-garden herbicide business. Under the agreement, beginning in the fourth quarter of 1998, Scotts was obligated to pay us a \$20 million fixed fee each year to defray costs associated with the lawn-and-garden business. Scotts' payment of a portion of this fee owed in each of the first three years of the agreement was deferred and is required to be paid at later dates, with interest. Monsanto is accruing the deferred portions of the \$20 million annual fixed fee owed by Scotts ratably over the periods during which it is being earned as a reduction of SG&A expenses. We are also accruing the interest on the amounts owed by Scotts and including it in interest income. The total amount owed by Scotts, including accrued interest, was \$50 million as of Dec. 31, 2002, and \$48 million as of Dec. 31, 2001. Scotts has begun paying these deferred amounts (\$5 million per year in monthly installments beginning Oct. 1, 2002).

Seeds and Genomics Segment

The Seeds and Genomics segment consists of our global seeds and related trait business, and our genetic technology platforms. We produce leading seed brands, including *DEKALB* and *Asgrow*, and we provide our seed partners with biotechnology traits for herbicide tolerance and insect protection.

Year Ended Dec. 31,	2002	2001	2000
Total Net Sales	\$1,585	\$1,707	\$1,608
Total Gross Profit	\$ 838	\$ 869	\$ 729

Seeds and Genomics Net Sales for 2002

Net sales for the Seeds and Genomics segment declined to \$1.6 billion in 2002. Sales in Latin America were negatively affected by the adverse market and economic conditions described below. The Latin American net sales decline was partially offset by strong U.S. sales and market performance of our branded corn seed. Trait revenues also increased from 2001 to 2002, despite the fact that 2001 trait revenues included an additional \$0.34 per share

from a timing change in revenue recognition. This change in timing resulted from our change from a technology fee system to a royalty system in the United States to simplify the purchase of seed with our traits, and to allow seed companies to have more flexibility in pricing their products. Grower acceptance of our biotechnology traits continues to rise, as demonstrated by the growth in total acres planted with our traits. In 2002, we estimate that acreage planted with Monsanto's technology traits grew by 13 percent in the United States and by 12 percent globally. Also contributing to the increased trait revenues was the benefit and growth of new agreements with key licensees.

Seeds and Genomics segment results in 2002 were significantly affected by events in Latin America. In 2002, we changed our business model in Latin America in order to reduce working capital levels and reduce our credit risk and exposure in Argentina and Brazil as a result of the continued economic uncertainty in that region. Results were also affected by adverse market conditions in 2002 and 2001. In Argentina, we experienced approximately \$75 million of higher-than-anticipated seed returns (primarily corn seed) in 2002 because of the economic crisis that originated at the end of 2001 and the flooding in that same year. In 2001, we experienced approximately \$120 million of higher-than-anticipated returns of high-priced corn seed, primarily in Brazil. The 2001 seed returns resulted from a strategic decision in 2000 to sell higher-performance corn seed. However, farmers chose not to plant that seed, resulting in substantial returns of relatively high-priced corn seed in 2001. In 2002, the continued deterioration of the Brazilian corn market negatively affected sales. Farmers have switched more land to soybeans because of their lower input costs, and Monsanto has less of a presence in the Brazilian soybean market.

Our Latin American grain sales program also affected the year-to-year comparison. Results in 2001 included approximately \$65 million of net sales and related cost of goods sold associated with this program. During 2002, we changed the way we account for the program to no longer record revenues and cost of goods sold of essentially the same amount. Under the revised program, we no longer take ownership of the grain, thereby eliminating the associated inventory risk. Although this change affects our net sales and cost of goods sold comparison, the effect on the EBIT year-to-year comparison is minimal.

Corn seed and corn biotechnology trait revenues in the United States increased, reflecting an increase in planted corn acreage in 2002 and strong market performance by our *DEKALB* and *Asgrow* brands during the 2002 selling season. Our branded corn seed gained market share in 2002. Monsanto's *Roundup Ready* and *YieldGard* corn traits — both the single-trait and the stacked-trait versions — performed exceptionally well. A decline in U.S. soybean seed and soybean trait revenues, which stemmed from the reduced planting area, slightly offset these corn seed and trait sales increases. However, despite the market dynamics of lower acres and an increased supply of seed, our soybean brands maintained their price in 2002, and held most of the market share gains achieved in 2001. Even though fewer planted acres of soybeans are expected in 2003, U.S. soybean trait revenues in preparation for the upcoming season increased as a higher percentage of our branded seed sales contained a biotechnology trait.

Seeds and Genomics Net Sales for 2001

Net sales for the Seeds and Genomics segment totaled \$1.7 billion in 2001, topping 2000 sales of \$1.6 billion by more than 6 percent. Revenues from our biotechnology traits increased significantly compared with year-ago sales, because of a number of factors. Higher trait revenues, primarily in the United States, were driven by increased demand for our technologies (including higher-value stacked traits), a higher *Roundup Ready* soybean royalty rate, and to a greater extent, a shift in timing. A new pricing structure and approach to the market starting with the 2002 selling season resulted in a shift in the recognition of certain trait revenues from third-party seed companies from the first half of 2002 to the last half of 2001. This decision to change from a technology fee system to a royalty system contributed approximately \$90 million, or \$0.34 per share, to 2001 net income. Net sales in 2001 also included trait revenues received from Pioneer upon resolution of issues related to our MON810 *YieldGard* products. These revenues reflect royalties related to MON810 *YieldGard* products sold during 2001. Stronger cotton revenue reflected higher demand for and use of biotechnology traits, particularly our stacked *Bollgard* and *Roundup Ready* traits. Conventional soybean seed sales also increased, as more U.S. acres were planted in soybeans in 2001. More than 70 percent of the U.S. planted soybean acres contained our *Roundup Ready* trait in 2001. Worldwide, the number of acres planted with our biotechnology traits increased approximately 14 percent to 118 million acres in 2001, from 103 million acres in 2000.

Our 2001 sales results also benefited from approximately \$65 million in net sales related to our Latin American grain sales program. As discussed above, this program, which helped reduce our credit risk during 2001, increased net sales but contributed minimally to gross profit and EBIT.

Lower conventional corn seed sales in Latin America offset these net sales increases, as higher-than-anticipated returns of relatively high-priced corn seed negatively affected 2001 sales by approximately \$120 million. These seed returns resulted from our strategic decision in 2000 to sell higher-performance corn seed. Many farmers chose not to plant that seed, which resulted in substantial returns of relatively high-priced corn seed in 2001. Corn seed sales in the United States also decreased. Fewer acres were planted in corn in 2001, partly because many U.S. farmers chose to plant more acres in soybeans.

Seeds and Genomics EBIT and EBITDA

Year Ended Dec. 31,	2002	2001	2000
EBIT ⁽¹⁾	\$(105)	\$(240)	\$(581)
Add: Depreciation	95	91	65
Amortization	128	234	272
EBITDA ⁽²⁾	\$ 118	\$ 85	\$(244)

(1) Earnings (loss) before extraordinary item, cumulative effect of accounting change, interest, and income taxes.

(2) Earnings (loss) before extraordinary item, cumulative effect of accounting change, interest, income taxes, depreciation, and amortization.

EBIT for 2002

Seeds and Genomics EBIT in 2002 was a loss of \$105 million, an improvement over the 2001 EBIT loss of \$240 million. This EBIT improvement was achieved despite an overall decline in sales for the segment. Most of our goodwill relates to our acquired seed businesses, so this segment's EBIT benefited from no longer amortizing goodwill in 2002. In 2001, this segment's EBIT loss included \$117 million of goodwill amortization expense. Seeds and Genomics EBIT also benefited from strong performance of our branded corn seed in the United States. Corn trait revenues increased, despite the fact that 2001 net sales included two seasons of licensed trait revenues because of a change from a technology fee system to a royalty system. The overall increase in corn trait revenues in the United States demonstrates continued grower acceptance of our biotechnology traits, and an increasingly higher percentage of our seed sales includes one or more biotechnology traits. These EBIT improvements were partially offset by lower soybean seed and trait sales in the United States and lower seed sales in Latin America. Our previously described actions in Latin America, combined with the adverse market and economic conditions, negatively affected both net sales and gross profit in 2002; higher-than-anticipated returns of Brazilian corn seed negatively affected EBIT in 2001. In 2002, Seeds and Genomics EBIT also was negatively affected by a portion of the increase in bad-debt expense related to estimated uncollectible accounts receivable in Argentina. Lower seed inventory costs in the United States were mostly offset by higher seed obsolescence in Latin America. However, gross profit as a percentage of sales increased. Sales gains in high-margin traits more than offset the Latin American gross profit declines.

Lower operating expenses had a positive effect on EBIT. SG&A spending was lower as a result of our continued focus on cost management and lower employee-related costs. R&D expenses also declined, reflecting savings from the restructuring of our early genomics programs.

Several items affected other expense (net) in both years. In 2002, we recognized other expense related to the broad-reaching business agreement with Pioneer and DuPont. In 2001, we recognized other income from a deferred payout provision related to a past business divestiture and the impairment of an equity investment. EBIT in 2001 also included the net effects of two separate legal matters. We established a \$50 million reserve related to punitive damages awarded to Aventis from a licensing dispute with DEKALB Genetics. This charge was partially offset by \$22 million of other income recorded in connection with the resolution of litigation matters with DuPont and its Pioneer subsidiary. In both 2002 and 2001, we recorded other income related to gains that were realized upon the sale of equity securities.

EBIT for 2001

Seeds and Genomics segment EBIT improved to a loss of \$240 million in 2001, from a loss of \$581 million in 2000. Higher net sales and continued cost management drove the EBIT improvement. Restructuring and other special items affected EBIT

during 2000 and, to a much lesser extent, during 2001. The 2000 special items included a significant write-down of goodwill, and higher net charges than those recorded in 2001 related to our plan to focus on certain key crops. EBIT in 2001 also included the net effects of the Aventis and DuPont legal matters discussed above.

Gross profit for the Seeds and Genomics segment increased 19 percent from 2000 gross profit. As a percentage of net sales, gross profit improved 6 points. This improvement was fueled by higher sales of relatively high-margin trait revenues, which more than mitigated the negative effects of the corn seed returns in Latin America and lower corn seed sales in the United States. As previously discussed, our 2001 results benefited from a change in the marketing approach on trait fees. Lower manufacturing costs were partially offset by higher inventory obsolescence expense.

Declines in operating expenses reflected our cost management efforts as we narrowed our focus to certain key crops. SG&A expenses declined 12 percent in 2001, and R&D expenses declined 7 percent. The SG&A improvement also benefited from the absence of amortization related to certain seed assets that became fully amortized during 2000, as well as lower employee-related expenses. As a percentage of net sales, operating expenses improved by 9 points.

Other expense (net) increased \$25 million in 2001, largely because of the Aventis and DuPont litigation matters. The devaluation of the Argentine peso, higher equity affiliate expense related to our Renessen joint venture, and impairments of equity investments also drove other expenses higher. These items were slightly offset by the gain on the sale of equity investments.

Restructuring and Other Special Items

For 2002 and each of the prior two years, our results included restructuring and other special items that significantly affected net income. See Note 4 — Restructuring and Other Special Items — to the consolidated financial statements for further details. The pretax income (expense) components were as follows:

Year Ended Dec. 31,	2002	2001	2000
Restructuring charges	\$ (88)	\$ (99)	\$ (70)
Reversal of restructuring reserves	13 ⁽¹⁾	8	4
Write-offs of:			
Trade receivables	—	—	(12)
Inventories	(6)	(45)	(60)
Property, plant and equipment	(45)	(57)	(22)
Goodwill	—	(2)	(88)
Other intangible assets	—	(3)	(3)
Other assets	—	(9)	—
Recoverable amount from a third party	2	—	—
Other — net	—	(6)	(10)
Total restructuring and other special items	\$ (124)	\$ (213)⁽²⁾	\$ (261)⁽²⁾

(1) Of this amount, \$8 million of the 2002 reversals related to the 2000 restructuring plan.

The remaining \$5 million related to the 2002 restructuring plan.

(2) These components represent the net charges for the 2000 restructuring plan. The total for the two-year plan is \$474 million.

2002 Restructuring Plan (charges recorded in 2002)

In 2002, Monsanto's management approved a restructuring plan to further consolidate or shut down facilities and to reduce the work force. Under this plan, various R&D programs and sites were shut down in the United States and Europe. This restructuring plan also involved the closure and downsizing of certain agricultural chemical manufacturing facilities in Asia-Pacific and the United States as a result of more efficient production capacity installed at other Monsanto manufacturing sites. Certain seed sites within the United States and within Brazil were consolidated and certain U.S. swine facilities were exited. Finally, the plan included work force reductions in addition to those related to the facility closures. These additional reductions were primarily marketing and administrative positions in Asia-Pacific, Europe-Africa, and the United States.

In connection with the 2002 restructuring plan, we recorded \$132 million pretax (\$86 million aftertax) of net charges in 2002. These restructuring costs primarily related to the closure of certain research and manufacturing sites, as well as work force reductions. Work force reductions of \$64 million include involuntary employee separation costs for approximately 1,140 employees worldwide, including positions in marketing, manufacturing, R&D, and administration. As of Dec. 31, 2002, approximately 940 of the planned employee separations were completed. Facility closures and other exit costs totaled \$24 million: contract terminations (\$8 million), equipment dismantling and disposal (\$8 million), and other shutdown costs (\$8 million) resulting from the exit of certain research and manufacturing sites. We also wrote off \$45 million of property, plant and equipment and \$6 million of inventories (recorded within cost of goods sold) associated with these exit activities.

Restructuring reversals of \$5 million offset these charges, as did a \$2 million recoverable amount from a third party. The reversals stemmed primarily from facility closing costs that were lower than originally estimated and higher proceeds from disposed assets than originally estimated. Restructuring reversals were recorded for work force reductions, primarily because severance expenses were lower than originally estimated. The recoverable amount from a third party represents a portion of work force reduction and exit costs that will be reimbursed to Monsanto.

As of Dec. 31, 2002, the reserve balance related to this plan was \$46 million. Cash payments to complete these restructuring actions are expected to be made by the end of 2003, and will be funded from operations. These payments are not expected to affect the company's liquidity significantly. We anticipate that the actions related to this plan will yield annual cash savings of more than \$50 million.

2000 Restructuring Plan (charges recorded in 2001 and 2000)

In 2000, Monsanto's management formulated a plan as part of our overall strategy to focus on certain key crops and to streamline operations. Restructuring and other special items, primarily associated with the implementation of this plan, were recorded in 2000 and 2001. These charges totaled \$474 million pretax (\$334 million aftertax): \$261 million (\$197 million aftertax) recorded in 2000, and \$213 million (\$137 million aftertax) recorded in 2001.

The 2001 net charges were primarily for the streamlining of manufacturing operations, the discontinuation of certain seed hybrids, the elimination of noncore activities, and the exit of certain research programs. This plan also involved the closure and downsizing of certain agricultural chemical manufacturing facilities to eliminate duplicate manufacturing capacity to formulate and package herbicides. Due to geographical location and cost considerations, improved technologies were installed at other Monsanto manufacturing sites. These sites, by incorporating technological advancements, have been able to increase their production capacity to meet current and expected future demand for *Roundup* herbicide and other herbicides. The pretax charge of \$213 million was partially offset by the reversal of \$8 million of restructuring liabilities recorded during 2000 and 2001, primarily because severance expenses were lower than originally estimated. In addition, reversals of \$4 million were recorded in 2001 primarily because severance expenses relating to the 1998 restructuring plan were lower than originally estimated.

The work force reduction charges in 2001 (\$50 million) and 2000 (\$61 million) included involuntary separation costs for approximately 1,500 employees worldwide, including positions in administration, R&D, and manufacturing. As of Dec. 31, 2002, more than 1,400 of the planned employee separations were completed.

Facility closures and other exit costs in 2000 included contract termination costs (\$5 million), equipment dismantling and disposal costs (\$2 million), and other shutdown costs (\$2 million). Facility closures and other exit costs in 2001 included contract termination costs (\$28 million), property, plant and equipment dismantling and disposal costs (\$18 million), and other shutdown costs (\$3 million). The inventory write-offs in 2000 related to laureate oil, seed and other inventories. The inventory write-offs in 2001 related to discontinued seed hybrids (\$31 million), unused raw materials at closed agricultural chemical manufacturing facilities (\$6 million), and other inventories, including certain discontinued agricultural chemical products (\$8 million). Inventory write-offs for both years, as well as \$37 million in property, plant and equipment impairments in 2001, were recorded in cost of goods sold. The remaining \$20 million in property, plant and equipment impairments in 2001 was recorded in restructuring charges, and was related to the consolidation of agricultural chemical distribution sites and various corporate assets. The intangible asset impairment in 2000 included a \$79 million goodwill impairment associated with the decision to terminate certain nutrition programs.

Restructuring reversals of \$8 million relating to this plan were required in 2002. The majority of the reversals resulted from facility closing costs that were lower than originally estimated and higher than originally estimated proceeds from disposed assets. The remaining reversals were required because a number of positions originally in the plan were eliminated through attrition.

These actions have yielded annual cash savings of more than \$100 million. The outstanding restructuring reserve balance related to this plan is \$17 million. We expect the remaining work force reductions, asset dispositions, and other exit activities associated with this plan to be completed by mid-2003. The remaining restructuring actions will be funded from operations. These actions are not expected to affect the company's liquidity significantly.

Also included in the 2000 plan were special items. In 2001, a total charge of \$6 million was recorded in other expense (net) to reflect the impairment of equity investments caused by adverse business developments of the investees. In 2000, there were other special items of \$10 million: \$3 million for costs associated with a failed joint venture, and \$7 million for the recognition of an impairment of a marketable equity security that was classified as available for sale.

Financial Condition, Liquidity, and Capital Resources

Working Capital and Financial Condition

As of Dec. 31,	2002	2001
Working capital	\$2,614	\$2,420
Current ratio	2.44:1	2.02:1

Our balance sheet as of Dec. 31, 2002, reflects working capital of \$2.6 billion, a \$200 million increase from the prior year-end. Lower receivables and inventories were more than offset by higher cash and short-term investments. Our cash and cash equivalents increased, largely because customer prepayments were higher in the fourth quarter of 2002 than in the fourth quarter of 2001. Approximately \$250 million was invested as short-term debt securities. These amounts will be used to fund various anticipated cash needs in 2003. Accounts payable declined, reflecting lower spending as we continue to manage costs. The factors above, as well as our customers' use of a new customer financing program (discussed below) for certain U.S. distributors, resulted in our having no commercial paper borrowings outstanding at the end of 2002.

The cash and short-term investments increases, coupled with lower payables, drove working capital higher. However, these working capital increases were partly offset by the effect of lower inventories and, to a greater extent, lower net trade receivables at year-end 2002 than at year-end 2001. Effective management of inventories and lower production rates led to lower finished goods and raw materials inventory levels. Goods in process inventories increased slightly, resulting from a strategic increase in our safety stock levels. Net trade accounts receivable were \$1.8 billion on Dec. 31, 2002, down considerably from Dec. 31, 2001, net trade receivables of \$2.3 billion. Net accounts receivable in Argentina and Brazil declined to \$528 million, from more than \$1 billion in net accounts receivable in 2001. The decline in worldwide net trade receivables was due to many factors, including lower sales, the \$154 million pretax Argentine bad-debt reserve established in the second quarter of 2002, and a relatively high proportion of sales on cash terms in Argentina. In addition, aggressive collection efforts, particularly in Latin America, and higher customer prepayments contributed to the receivables decline.

The reduction of receivables also reflects our customers' use of a new financing option that is available to certain of our customers. Under the program, Monsanto refers its interested U.S. distributors to a third-party specialty lender administered by Bank One, N.A., to fund their purchases of Monsanto products at attractive interest

rates. In connection with this new financing option, we collected over \$100 million in 2002 which would otherwise not have been collected until 2003. This new \$500 million revolving credit and liquidity facility allows certain major U.S. customers to finance product purchases, and allows us to reduce our reliance on commercial paper borrowings. The company originates these loans on behalf of the third-party specialty lender using Monsanto's credit guidelines approved by the lender, a special purpose entity. The loans are sold to multi-seller commercial paper conduits through a nonconsolidated qualifying special purpose entity (QSPE). We have no ownership interest in the lender, the QSPE, or the loans. We service the loans and provide a first loss guarantee of up to \$100 million. We have not issued, nor are we obligated to issue, any debt or equity securities in connection with this arrangement.

As of Dec. 31, 2002, the customer loans held by the QSPE and the QSPE's liability to the conduits was \$111 million. The lender or the conduits may restrict or discontinue the facility at any time. If the facility were to terminate, existing sold loans would be collected by the QSPE over their remaining terms (generally 12 months or less) and we would revert to our past practice of providing customers with direct credit purchase terms. Servicing fee revenues were not significant. As of Dec. 31, 2002, Monsanto's recorded guarantee liability was less than \$1 million, based on our historical collection experience with these customers and our current assessment of credit exposure. Adverse changes in the actual loss rate would increase the liability. In January 2003, FASB Interpretation (FIN) No. 46, *Consolidation of Variable Interest Entities*, was issued. Because QSPEs are excluded from the scope of FIN 46, we do not expect that this interpretation will affect our accounting related to this arrangement.

Cash Flow

Year Ended Dec. 31,	2002	2001	2000
Cash provided by operations	\$1,108	\$616	\$671
Cash required by investing activities	(469)	(433)	(935)
Free Cash Flow	639	183	(264)
Cash provided (required) by financing activities	(518)	(7)	369

Free cash flow, which represents the total of cash flows provided by operations and required by investing activities, totaled \$639 million in 2002. This is a more than threefold increase from 2001 free cash flow of \$183 million. Though net income was lower in 2002 than in 2001, our operations generated almost twice as much cash in 2002. This improvement is primarily a result of careful management of our investments in trade receivables and inventories. Capital expenditures declined 41 percent from 2001 to 2002, as we completed a number of significant capital projects during 2001. Cash required by investing activities increased slightly, to \$469 million, reflecting the \$250 million investment of excess cash, partially offset by the lower capital expenditures and by proceeds from asset sales. In 2002, we received \$72 million of proceeds from the disposal of property and investments. This amount includes the sale of herbicide assets to Nissan. We also received approximately \$50 million from the long-term supply agreement with Nissan, which was included in cash flow from operations.

Capital Resources and Liquidity

As of Dec. 31,	2002	2001
Debt-to-capital ratio	19%	19%

Our debt-to-capital ratio remained steady at 19 percent, despite the dramatic decline in shareowners' equity in 2002. Shareowners' equity was reduced by the goodwill impairment charge and the recognition of additional minimum pension liabilities. Our total debt outstanding at Dec. 31, 2002, declined from 2001 year-end levels, reflecting our strong free cash flow and the strength of our balance sheet, discussed previously.

Cash provided by operations is a major source of working capital funds. To the extent that cash provided by operations was not sufficient to fund our cash needs, generally during the first half of the year, short-term commercial paper borrowings were used to finance these requirements. In 2003, we expect to generate cash both from operations and from debt issuances, primarily commercial paper. We will use the \$250 million investment in short-term investments to fund cash needs in the first half of 2003. Although cash from operations will remain an important source of cash in 2003, we expect cash from operations to be lower in 2003 than it was in 2002. In 2002, we achieved a dramatic reduction in global receivables and inventories. Additionally, we anticipate higher tax payments and pension contributions in 2003. Further, the higher level of customer prepayments at the end of 2002 is not expected to be repeated in 2003. Cash from operations could be further reduced if there are unanticipated reductions in the prices or volumes of our products. In that event, we believe we have adequate capacity to finance our cash requirements without a material adverse effect on our liquidity.

In August 2002, we issued \$800 million of 7-3/8% Senior Notes due Aug. 15, 2012, in two separate tranches. These notes were issued pursuant to a May 2002 shelf registration, under which \$1.2 billion remains available for future debt issuances. We have committed external borrowing facilities amounting to \$1.3 billion that were unused as of Dec. 31, 2002. These facilities largely exist to support commercial paper borrowings, and covenants under these credit facilities restrict maximum borrowings. These credit facilities give us the financial flexibility to satisfy short- and medium-term funding requirements. One is an \$800 million, 364-day facility that expires in July 2003; the other is a \$500 million facility that expires in 2005. See Note 11 — Debt and Other Credit Arrangements — to the consolidated financial statements for further details. We anticipate that we will renew the \$800 million facility in 2003, though it could be at a lower amount as we expect to have reduced reliance on commercial paper compared with 2002.

Contractual Obligations

We have certain obligations and commitments to make future payments under contracts; current estimates of our future payments under these obligations are set forth in the table below.

	Payments Due by Period						2008 and beyond
	Total	2003	2004	2005	2006	2007	
Long-term debt	\$ 856	\$ —	\$ 27	\$ 18	\$ 11	\$ —	\$ 800
Operating lease obligations	99	34	22	14	9	6	14
Purchase obligations:							
Uncompleted additions to property	20	20	—	—	—	—	—
Commitments to purchase inventories	204	104	25	17	17	12	29
Commitment to purchase breeding research	448	45	45	45	45	45	223
R&D alliances and joint venture obligations	524	70	68	68	68	68	182
Other purchase obligations	351	53	53	53	53	53	86
Other long-term liabilities reflected on the balance sheet:							
Vendor financing	25	9	5	5	5	1	—
Total contractual obligations	\$2,527	\$335	\$245	\$220	\$208	\$185	\$1,334

Seasonality

Our businesses are seasonal. Historically, we have recorded our highest levels of sales and income in the first half of the year, consistent with the purchasing and growing patterns in North America, our largest market. We historically have recorded net losses during the second half of the year. However, our change in 2001 to a royalty-based system has shifted the recognition of certain trait revenues from the first half of the year to the last half of the previous year. Our business model changes in Latin America have also shifted a portion of sales closer to the end of the fiscal year. Even with these business changes, a majority of our sales and income will still be generated in the first half of the year. Sales and income may shift somewhat between quarters depending on growing conditions.

As is the practice in our industry, we regularly extend credit to enable our customers to acquire crop protection products and seeds at the beginning of the growing season. Because of the seasonality of our business and the need to extend credit to customers, we use short-term borrowings to finance working capital requirements. Our need for such financing is generally highest in the second quarter and lowest in the fourth quarter. Our customer financing program is expected to reduce our reliance on commercial paper borrowings and to reduce our peak in working capital investment in the second quarter. In addition, moving sales in Latin America closer to the time the farmers use the products will smooth out the fluctuations as a higher level of receivables will be outstanding in the fourth quarter than in the past.

Outlook

Focused Strategy

We believe that the focused approach to our business and the value we bring to our customers will allow us to maintain an industry leadership position in a difficult agricultural and economic environment. Growth from our traditional products will continue to be challenged in these conditions, but we believe that our portfolio of integrated products and services continues to offer farmers cost-effective and value-added solutions. In the near term, we

are focused on achieving continued growth in our seeds and traits businesses, while ensuring that *Roundup* and our other herbicides continue to make strong contributions to cash flow and gross profit. Securing biotechnology approvals and continued development and commercialization of our research pipeline are key factors to our future growth, as we continue to transform our business to greater reliance on our seed and higher-margin traits businesses. Increased revenues from seed and traits are expected to help offset the anticipated decline in *Roundup's* gross profit contribution. Our seed biotechnology business is discussed in greater detail below. We will also continue to pursue strategic alliances involving the sale or license of certain products or product lines where appropriate. This will allow us to focus our efforts on areas where we can offer an integrated portfolio of seeds, traits and chemicals.

We remain committed to managing our operating costs and improving our cash position through working capital and capital expenditure management. We aim to maintain the progress we made in managing our investment in working capital, particularly receivables and inventories. We will also continue to seek additional external financing opportunities for our customers to supplement the new customer financing program discussed in "Working Capital and Financial Condition."

Seeds and Traits

Monsanto invests more than 80 percent of its R&D in the areas of seeds, genomics and biotechnology. These are the fastest-growing segments of the agriculture industry. As these segments become more important to our business, we have increased our focus in this area. Monsanto has built a leading global position in seeds, and successful integration of our seed businesses has allowed us to optimize our seed portfolio. We continue to make improvements in our base seed business, as advanced breeding techniques combined with production practices and plant capital investments have significantly improved germplasm quality and yields. Our biotechnology seed traits, such as herbicide tolerance and insect protection, are expressed in products such as *Roundup Ready* soybeans and *YieldGard* corn. Biotechnology traits offer growers several benefits: lower costs, greater convenience and flexibility, higher yields, and the ability to adopt environmentally responsible

practices such as conservation tillage. We have introduced biotechnology traits for glyphosate tolerance and for insect protection.

Roundup and other glyphosate-based herbicides can be applied over the top of our glyphosate-tolerant *Roundup Ready* crops, controlling weeds without injury to the crop. This integration of agricultural chemicals and enhanced seeds offers growers a cost-effective solution for weed control. To date, we have introduced *Roundup Ready* traits in soybeans, corn, canola and cotton. In addition, our insect-protection seed traits, such as *YieldGard* for corn and *Bollgard* for cotton, serve as alternatives to certain chemical pesticides. We also offer "stacked" *Roundup Ready* and insect-protection traits for corn and cotton. Stacked traits represent more than one trait in a single crop plant. These stacked traits offer significant growth potential. We currently estimate that 138 million acres were planted with our seed biotechnology traits worldwide in 2002, compared with approximately 123 million in 2001 and only four million in 1996.

Our existing traits also provide excellent future growth opportunities. We are working to secure additional biotechnology approvals for our existing products globally, and toward the development and commercialization of additional biotechnology traits and products in our research pipeline. We are continuing our efforts to obtain approval for the planting of *Roundup Ready* soybeans in Brazil, and for the importation of corn that contains the *Roundup Ready* trait into Europe. We have two new biotechnology traits ready to enter the U.S. market in 2003. In late December 2002, Monsanto's *Bollgard II*, a second-generation insect-protected cotton product, received full regulatory approval from the U.S. Environmental Protection Agency (EPA). Limited quantities of seed containing the *Bollgard II* trait are expected to be available for the 2003 season, once we receive environmental clearance from Japan. *YieldGard Rootworm* insect-protected corn has received clearances from all necessary U.S. regulatory agencies — the U.S. Food and Drug Administration, the U.S. Department of Agriculture (USDA), and the EPA. *YieldGard Rootworm* insect-protected corn had previously received all necessary import clearances from Japanese regulatory agencies. In 2002, our seed partner in India, Maharashtra Hybrid Seed Company Limited, received commercial approval for *Bollgard* insect-protected cotton. This is the first biotechnology crop approved by India, one of the world's largest cotton producing countries. Also in 2002, the Department of Agriculture's Bureau of Plant Industry in the Philippines granted commercial approval to Monsanto's *YieldGard Corn Borer* insect-protected corn. This is the first biotech crop approved for planting in the Philippines. Approvals were also granted in Australia for *Bollgard II* cotton and in the Republic of South Africa for certain corn and cotton traits.

We continue to address concerns raised by consumers in some regions and by public interest groups and questions from government regulators regarding agricultural and food products developed through biotechnology. We are committed to addressing these issues, and to achieving greater acceptance, efficient regulation, and timely commercialization of biotechnology products. We also continue to address concerns about the adventitious or unintended trace presence of biotechnology materials in seed, grain or food. We expect these types of issues to continue. We are addressing the issue of adventitious presence through our own seed quality

programs, by working with others in seed, grain, feed and food industry associations, by developing information to improve both understanding and management of biotechnology and seed production quality, and by continuing globally to seek regulations that recognize and accept the adventitious presence of commercial biotechnology traits and provide for approval and acceptance of trace amounts of precommercial traits.

Roundup Herbicide

Although *Roundup* herbicide faces significant competitive pressures, it remains a key part of our integrated strategy. We believe that glyphosate volumes, including volumes of *Roundup*, will continue to grow through increased conservation tillage, which helps farmers reduce soil erosion by replacing plowing with the judicious use of herbicides to control weeds, and through applications of *Roundup* over the top of increased acreage of *Roundup Ready* crops. We intend to remain a market leader by providing new and unique formulations of *Roundup* herbicide (such as *Roundup WeatherMAX* herbicide, which provides consistent weed control even in a variety of challenging weather conditions). We also remain committed to providing valuable services to growers, and to offering integrated seed, biotechnology and chemistry solutions. We also expect to continue to benefit from our bulk logistics and low-cost manufacturing capabilities for herbicides. Our investments in our facilities and manufacturing advances have helped us maintain our low-cost position. In addition, we sell glyphosate to other herbicide producers to capitalize on our manufacturing economies of scale.

Even as we face increased competition for our *Roundup* business, we plan to build on our advantages to capture and sustain value. Without patent protection worldwide, *Roundup* herbicide faces competition from producers and marketers of glyphosate, whose pricing policies in most instances cause downward pressure on our prices. Since the expiration of our U.S. glyphosate patent in 2000, we have faced increased competitive pressures in the United States, our largest market for *Roundup*. Our U.S. market share has declined in recent years, and we expect continuing declines over the next few years. The current plan for the *Roundup* herbicide business in the United States assumes that we will continue to see growth in the overall market for glyphosate, while facing price and market share declines for our *Roundup* brands. However, if decreases in price or market share, or growth of the overall market, deviates significantly from our expectations, we will need to consider additional changes to our business model.

We expect *Roundup* herbicide prices to continue to decline in the United States. We reduce prices in selected markets in order to increase volumes, penetrate new markets and compete effectively. We expect to continue to reduce average prices selectively through discounts, rebates, or other promotional strategies, as well as through new formulations and product mix changes. We expect our pricing strategy to result in a reduction in our *Roundup* revenues and gross margin, consistent with the reduction in recent years.

In recent years, distribution channel inventories have increased significantly in the United States. However, year-end *Roundup* distribution inventory levels in the United States were roughly flat with levels at 2001 year-end, and our intention is that these

inventories remain flat over the next few years. However, many factors that are not within our control may affect usage of *Roundup* herbicides and may also affect distribution inventories — for example, adverse weather conditions such as those we experienced in the United States in 2002. Higher product levels at our distributors could have a material adverse effect on our future results of operations. Further, an unanticipated rate of reduction in prices of competitive glyphosate products or in *Roundup* usage could materially adversely affect *Roundup* pricing and our financial results. In addition, if distributors elect to reduce their inventory levels from current levels, sales volumes of *Roundup* herbicides would be materially adversely affected.

Latin America

In 2002, we implemented changes in how we approach our Latin American business because of continued economic and market uncertainties in that part of the world. The actions we have taken with our customers and the operational decisions we have made have reduced working capital, distribution inventory levels, and credit risk and other exposures in that region, by focusing on collections and maximizing cash flows. Although these steps reduced sales and earnings for 2002, we believe that they were appropriate for our business in the long term.

We have been affected by significant reforms in Argentine monetary legislation and a decline in the value of the Argentine peso. While we have prepared our 2001 and 2002 financial statements relating to the Argentine operations on a U.S. dollar functional basis, we could be required to change our functional currency designation in Argentina based on future government economic reforms. Our sales, margins, and foreign currency transactional gains/losses could be adversely affected by fluctuations in foreign currency exchange rates and the level of inflation experienced. In addition, Monsanto's ability to repatriate funds from Argentina may be restricted.

In March 2002, the Argentine government issued a decree establishing a 20 percent export tax on agricultural exports. It also ruled that U.S. dollar-denominated contracts in agricultural markets entered into prior to Jan. 6, 2002, and which had been converted to pesos at a 1:1 exchange rate pursuant to an earlier government decree (Predevaluation Contracts), must be honored at the same exchange rate as the one obtained for exports of the agricultural products that contain the agricultural inputs. This decree was amended on July 2, 2002, with the issuance of Resolution No. 143, which states that the future settlement of the Predevaluation Contracts on farm inputs for corn and soybeans will be subject to a 25 percent reduction (including the 20 percent export taxes discussed above) on the U.S. dollar price.

The company has been able to collect essentially all of its Predevaluation Contracts that were secured with grain, net of the 25 percent reduction on amounts owed for Predevaluation Contracts. A significant portion of 2002 sales in Argentina was made for either cash or grain. As of Dec. 31, 2002, the majority of the net Argentine receivables are secured with grain or other means, with the remainder representing large, international creditworthy customers. We will continue to operate with a majority of our sales made in Argentina on cash or grain terms.

In the second quarter of 2002, we increased the allowance for doubtful trade receivables by \$154 million pretax for estimated uncollectible accounts receivable in Argentina. Of this amount, approximately \$100 million has been written off against accounts receivable as of Dec. 31, 2002. Although Monsanto cannot determine how government actions and economic conditions in Argentina will affect the value of the \$332 million of net trade receivables outstanding as of Dec. 31, 2002, we continue to pursue customer collections aggressively. Management's current assessment of the situation is that the collectibility of the accounts receivable has become more certain, and that the current allowance balance is adequate. The Argentine agricultural markets continue to be primarily export-oriented, and their export sales are generally denominated in U.S. dollars.

The Brazilian real has also fluctuated considerably during recent months. We have a hedging program in place to hedge anticipated Brazilian cash flows through the first half of 2003. While the majority of net current assets are protected against future fluctuation, further devaluation and other economic concerns could have an adverse effect on our sales and net income.

Other Information

As discussed in Note 20 — Commitments and Contingencies — to the consolidated financial statements, Monsanto is involved in a number of lawsuits and claims relating to a variety of issues. Many of these lawsuits relate to intellectual property disputes. We expect that such disputes will continue to occur as the agricultural biotechnology industry evolves.

For additional information on the outlook for Monsanto, see "Cautionary Statements Regarding Forward-Looking Information."

Critical Accounting Policies and Estimates

In preparing our financial statements, we must select and apply various accounting policies. Our most significant policies are described in Note 2 — Significant Accounting Policies — to the consolidated financial statements. In order to apply our accounting policies, we often need to make estimates based on judgments about future events. In making such estimates, we rely on historical experience, market and other conditions, and on assumptions that we believe to be reasonable. However, the estimation process is by its nature uncertain given that estimates depend on events over which we may not have control. If market and other conditions change from those that we anticipate, our financial condition, results of operations, or liquidity may be affected materially. In addition, if our assumptions change, we may need to revise our estimates, or to take other corrective actions, either of which may also have a material effect on our financial condition, results of operations, or liquidity. On Feb. 18, 2003, members of our senior management discussed the development and selection of our critical accounting estimates, and our disclosure regarding them, with the audit and finance committee of our board of directors.

We believe that the following estimates have a higher degree of inherent uncertainty and require our most significant judgments. In addition, had we used estimates different from any of these, our

financial condition, results of operations, or liquidity for the current period could have been materially different from those presented.

Allowance for Doubtful Trade Receivables: We maintain an allowance for doubtful trade receivables. This allowance represents our estimate of accounts receivable that, subsequent to the time of sale, we have estimated to be of doubtful collectibility because our customers may not be able to pay. In determining the adequacy of the allowance for doubtful accounts, we consider historical bad-debt experience, customer creditworthiness, market conditions, and economic conditions. We perform ongoing evaluations of our allowance for doubtful accounts, and we increase the allowance as required. Increases in this allowance will reduce the recorded amount of our net trade receivables and shareowners' equity, and increase our bad-debt expense. For example, in the second quarter of 2002, we increased our allowance for estimated uncollectible trade receivables in Argentina by \$154 million. This increase in the allowance was required because of the economic turmoil and market conditions there.

Allowances for Returns and Inventory Obsolescence: Where the right of return exists in our seed business, sales revenues are reduced at the time of sale to reflect expected returns. In order to estimate the expected returns, management analyzes historical returns, economic trends, market conditions, and changes in customer demand. In addition, we establish allowances for obsolescence of inventory equal to the difference between the cost of inventory and the estimated market value, based on assumptions about future demand and market conditions. We regularly evaluate the adequacy of our return allowances and inventory obsolescence reserves. If economic and market conditions are different from those we anticipated, actual returns and inventory obsolescence could be materially different from the amounts provided for in our consolidated financial statements. If seed returns are higher than anticipated, our net sales, net trade receivables and shareowners' equity for future periods will be reduced. If inventory obsolescence is higher than expected, our cost of goods sold will be increased, and our inventory valuations and shareowners' equity reduced. Higher-than-anticipated seed returns have recently affected our results of operations and financial condition. Results in 2002 were affected by approximately \$75 million of higher-than-anticipated seed returns (primarily corn seed) in Argentina because of the economic crisis that originated at the end of 2001 and the flooding in that same year. In 2001, we experienced approximately \$120 million of higher-than-anticipated returns of high-priced corn seed, primarily in Brazil because of an extremely unusual change in market conditions there.

Deferred Income Tax Assets: Management regularly assesses the likelihood that deferred tax assets will be recovered from future taxable income. To the extent management believes that it is more likely than not that a deferred tax asset will not be realized, a valuation allowance is established. When a valuation allowance is established or adjusted, an income tax charge is included in the consolidated financial statements and net deferred tax assets are adjusted accordingly. As of Dec. 31, 2002, Monsanto has recorded a valuation allowance totaling \$76 million against certain Brazilian tax loss carryforwards, an increase of \$13 million over 2001. This increase is the result of the company's analysis of the likelihood of realizing the future tax benefit of the loss carryforwards.

Changes in tax laws, statutory tax rates, and estimates of the company's future taxable income levels could result in actual realization of the deferred tax assets being materially different from the amounts provided for in the consolidated financial statements. If the actual recovery amount of the deferred tax asset is less than anticipated, we would be required to write off the remaining deferred tax asset and increase the tax provision, resulting in a reduction of shareowners' equity.

Goodwill: A majority of our goodwill relates to our seed company acquisitions. We are required to assess whether any of our goodwill is impaired. In order to do this, we applied judgment in determining our "reporting units," which represent distinct parts of our business. The definition of our reporting units affected the magnitude of our goodwill impairment. Our annual goodwill impairment assessment involves estimating the fair value of a reporting unit and comparing it with its carrying amount. If the carrying value of the reporting unit exceeds its fair value, additional steps are required to calculate a potential impairment loss. Calculating the fair value of the reporting units requires significant estimates and long-term assumptions. Any changes in key assumptions about the business and its prospects, or changes in market conditions, interest rates or other externalities, could result in an impairment charge. We estimate the fair value of our reporting units by applying discounted cash flow methodologies. In connection with the adoption of SFAS 142 in 2002, we recorded a \$2 billion pretax transitional impairment charge relating to our corn and wheat reporting units. This charge reduced the carrying amount of our goodwill, and it resulted in a cumulative effect of accounting change, which reduced net income and shareowners' equity. Future changes in the fair value of our reporting units could affect our goodwill and operating expenses and reduce shareowners' equity.

Pensions and Other Postretirement Benefits: The actuarial valuation of our pension and other postretirement benefit costs, assets and obligations affects our financial position, results of operations and cash flow. These valuations require the use of assumptions and long-range estimates. These assumptions include, among others: assumptions regarding interest and discount rates, which affect the present value of our obligations; assumed long-term rates of return on pension plan assets; and projected rates of salary increases. We regularly evaluate these assumptions and estimates as new information becomes available. Changes in assumptions (caused by conditions in the debt and equity markets, changes in asset mix, and plan experience, for example) could have a material effect on our pension obligations and expenses, and can affect our net income, intangible assets, liabilities, and shareowners' equity. In addition, changes in assumptions regarding rates of return, or declines in the fair value of plan assets, may result in voluntary decisions or mandatory requirements to make additional contributions to our qualified pension plan. Due to the design of our postretirement health care plans, our liabilities with respect to these plans are not highly sensitive to assumptions regarding health care cost trends.

Because of the decline in the equity markets, the fair value of the Monsanto pension fund assets has decreased. During 2002, the company recorded an additional minimum pension liability adjustment. This noncash adjustment decreased shareowners' equity by approximately \$200 million aftertax, but it did not affect our results

of operations. Also in 2002, because of this decline in the equity markets and its effect on the plan's funded status, we made voluntary cash contributions totaling \$20 million to our U.S. pension plan, and we anticipate additional voluntary funding of approximately \$60 million in 2003. We also anticipate that our pension expenses will continue to increase in 2003, which will reduce our net income. We recently reduced our expected return on pension plan assets from 9.50 percent to 8.75 percent. We also reduced the discount rate and annual salary increase assumptions. (See Note 13 — Postretirement Benefits — Pensions — for further details.) Holding all assumptions constant, we estimate that the three-quarter percent decrease in the expected return on plan assets will lower Monsanto's 2003 pretax income by approximately \$8 million. Likewise, we estimate that the one-half percent decrease in the expected discount rate and annual rate of salary increase will decrease Monsanto's pretax income by approximately \$1 million.

New Accounting Standards

SFAS No. 141, *Business Combinations*, requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001, thereby eliminating the pooling-of-interests method. It also provides broader criteria for identifying which types of acquired intangible assets must be recognized separately from goodwill and which must be included in goodwill. We adopted the provisions of SFAS 141 on Jan. 1, 2002, with the earlier adoption of the requirement to use the purchase method of accounting for all business combinations initiated after June 30, 2001. SFAS 141 also required Monsanto to reassess the useful lives, residual values, and classification of all identifiable and recognized intangible assets. Any necessary prospective amortization period adjustments were made Jan. 1, 2002.

On Jan. 1, 2002, Monsanto adopted SFAS 142, which changes the accounting for goodwill from an amortization method to an impairment-only method. Under SFAS 142, all goodwill amortization ceased effective Jan. 1, 2002. Also in 2002, Monsanto performed a transitional goodwill impairment test as of January 1. The transitional goodwill impairment test resulted in a \$2 billion pretax impairment charge relating to our corn and wheat reporting units, relating to goodwill that resulted primarily from our 1998 and, to a lesser extent, 1997 seed company acquisitions. The resulting noncash impairment charge was recorded as a cumulative effect of accounting change, effective Jan. 1, 2002. We also performed our annual impairment review during the third quarter. Our goodwill will be tested at least annually in the third quarter.

SFAS 142 did not require that prior periods be restated to reflect the nonamortization provision of the standard. Had Monsanto adopted the new accounting standard as of Jan. 1, 2000, Monsanto earnings per share for 2000 and 2001 would have increased by \$0.42 per share and \$0.40 per share, respectively. For further details see Note 8 — Goodwill and Other Intangible Assets — to the consolidated financial statements.

SFAS No. 143, *Accounting for Asset Retirement Obligations*, addresses financial accounting for and reporting of costs and obligations associated with legal obligations related to the retirement

of tangible long-lived assets. This statement became effective for Monsanto on Jan. 1, 2003. Upon adoption of this standard, in accordance with Accounting Principles Board (APB) Opinion No. 20, *Accounting Changes*, we expect to record an aftertax cumulative effect of accounting change of approximately \$15 million. This noncash charge will be recorded as of Jan. 1, 2003. In addition, as required by SFAS 143, as of Jan. 1, 2003, net property, plant and equipment will be increased by approximately \$10 million, and asset retirement obligations (a component of noncurrent liabilities) of approximately \$30 million will be recorded. In addition, our annual aftertax depreciation expense is expected to increase by less than \$0.01 per share. Adoption of this standard is not expected to affect Monsanto's liquidity or cash flow.

On Jan. 1, 2002, we adopted SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*. SFAS 144 replaces SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of* and establishes an accounting model for long-lived assets to be disposed of by sale. It applies to all long-lived assets, including discontinued operations. The adoption of SFAS 144 did not have a material effect on our consolidated financial position or results of operations.

In 2002, the FASB issued SFAS No. 145, *Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections*. SFAS 145 rescinds, updates, clarifies and simplifies existing accounting pronouncements. Among other things, SFAS 145 rescinds SFAS 4, which required all gains and losses from extinguishment of debt to be aggregated and, if material, to be classified as an extraordinary item, net of related income tax effect. Under SFAS 145, the criteria in APB Opinion 30 will now be used to classify those gains and losses. For Monsanto, the adoption of SFAS 145 resulted in a reclassification of the extraordinary loss related to the extinguishment of ESOP debt recorded in the second quarter of 2001 (\$2 million, net of taxes). This reclassification increased other expense (net) by \$4 million and decreased the income tax provision by \$2 million. The adoption of the remaining provisions of SFAS 145 did not have a material effect on Monsanto's consolidated financial position or results of operations.

Also in 2002, the FASB issued SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS 146 replaces Emerging Issues Task Force Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. SFAS 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date the company commits itself to an exit or disposal plan. This statement will become effective for exit or disposal activities initiated after Dec. 31, 2002. The adoption of SFAS 146 will have no effect on our existing restructuring actions, which were initiated prior to Dec. 31, 2002.

Market Risk Management

We are exposed to the effect of interest rate changes, foreign currency fluctuations, and changes in commodity and equity prices. Market risk represents the risk of a change in the value of a financial instrument, derivative or nonderivative, caused by fluctuations

in interest rates, currency exchange rates, and commodity and equity prices. Monsanto handles market risk in accordance with established policies by engaging in various derivative transactions. Such transactions are not entered into for trading purposes.

The sensitivity analysis discussed below presents the hypothetical change in fair value of those financial instruments held by the company as of Dec. 31, 2002, that are sensitive to changes in interest rates, currency exchange rates, and commodity and equity prices. Actual changes may prove to be greater or less than those hypothesized.

Because the company's short- and long-term debt exceeds cash and investments, Monsanto's interest-rate risk exposure pertains primarily to the debt portfolio. To the extent that we have cash available for investment to ensure liquidity, we will invest that cash only in short-term instruments. The majority of our debt as of Dec. 31, 2002, consists of fixed-rate, long-term obligations.

Market risk with respect to interest rates is estimated as the potential change in fair value resulting from an immediate hypothetical one percentage point parallel shift in the yield curve. The fair values of the company's investments and loans are based on quoted market prices or discounted future cash flows. We currently hold debt and investments that mature in less than 360 days, and variable rate medium-term notes. As the carrying amounts on short-term loans and investments maturing in less than 360 days and the carrying amounts of variable-rate medium-term notes approximate their respective fair values, a one percentage point change in the interest rates would not change the fair value of our debt and investments portfolio.

In May 2002, the company filed a \$2 billion shelf registration with the SEC. On Aug. 14, 2002, Monsanto issued \$600 million of 7-3/8% Senior Notes under this shelf registration. The aggregate principal amount of the outstanding notes was later increased to \$800 million. The fair value of this debt is approximately \$864 million as of Dec. 31, 2002. A one percentage point change in the interest rates would change the fair value by approximately \$60 million.

In managing foreign currency risk, Monsanto focuses on reducing the volatility in consolidated cash flow and earnings caused by fluctuations in exchange rates. We use forward-foreign currency exchange contracts and currency options to manage the net currency exposure, in accordance with established hedging policies. Monsanto hedges recorded commercial transaction exposures, intercompany loans, net investments in foreign subsidiaries, and forecasted transactions. The company's significant hedged positions included the Canadian dollar, the Brazilian real, the euro, the Swiss franc, the South African rand, the Philippine peso, and the Polish zloty. Unfavorable currency movements of 10 percent would negatively affect the fair market values of the derivatives held to hedge currency exposures by \$52 million.

Monsanto uses futures contracts to protect itself against commodity price increases, mainly in the Seeds and Genomics segment. The majority of these contracts hedge the committed or future purchases of, and the carrying value of payables to growers for, soybean and corn inventories. A 10 percent decrease in the prices would have a negative effect on the fair value of those futures of less than \$1 million for soybeans and less than \$2 million for corn.

The company also has investments in equity securities. All such investments are classified as long-term available-for-sale investments. The fair market value of these investments is \$40 million. These securities are listed on a stock exchange or quoted in an over-the-counter market. If the market price of the traded securities should decrease by 10 percent, the fair value of the equities would decrease by \$4 million. See Note 9 — Investments — to the consolidated financial statements for further details.

Cautionary Statements Regarding Forward-Looking Information

Under the Private Securities Litigation Reform Act of 1995, companies are provided with a "safe harbor" for making forward-looking statements about the potential risks and rewards of their strategies. We believe it is in the best interest of our shareowners to use these provisions in discussing future events. However, we are not required to, and you should not rely on us to, revise or update these statements or any factors that may affect actual results, whether as a result of new information, future events or otherwise. In addition, you should not place undue reliance on our forward-looking statements, which are current only as of the date of this filing. Forward-looking statements include: statements about our business plans; statements about the potential for the development, regulatory approval, and public acceptance of our products; estimates of future financial performance; predictions of national or international economic, political or market conditions; statements regarding other factors that could affect our future operations or financial position; and other statements that are not matters of historical fact. Such statements often include the words "believes," "expects," "anticipates," "intends," "plans," "estimates," "will," or similar expressions.

Our ability to achieve our goals depends on many known and unknown risks and uncertainties, including changes in general economic and business conditions. These factors could cause our actual performance and results to differ materially from those described or implied in forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed below.

Competition for Roundup Herbicide: Roundup herbicide is a major product line. Patents protecting Roundup herbicides in several countries expired in 1991, and compound *per se* patent protection for the active ingredient in Roundup herbicides expired in the United States in 2000. As a result, Roundup herbicides will continue to face increasing competition in the future, including in the United States. In order to compete in this environment, we rely on a combination of (1) marketing and logistics strategies, including new and improved formulations, (2) pricing strategy, and (3) decreased production costs.

Marketing and Logistics Strategy: We intend to respond to increasing competition by encouraging new uses (especially conservation tillage), by providing unique formulations and services, and by offering integrated seed and biotechnology solutions. The success of our Roundup marketing and logistics strategies will

depend on the continued expansion of conservation tillage practices and of *Roundup Ready* seed acreage, on our ability to develop services and marketing programs that are attractive to our customers, and on the continued success of our unique logistics and distribution systems and practices.

Pricing Strategy: Historically, we have reduced the average net sales price of *Roundup* herbicides in selected markets in order to increase volumes, to penetrate new markets, and to compete effectively. In addition to reduced list prices, price reductions may include discounts, rebates or other promotional strategies, as well as the development of new and lower-cost formulations for specific uses. However, there can be no guarantee that price reductions will stimulate enough volume growth to offset the price reductions and increase revenues. In the past, price reductions have not always stimulated volume growth and, where volumes have increased, the increases have not always been adequate to offset the price reductions and to increase revenues.

Production Cost Decreases: We also believe that technological innovations and increased volumes will lead to efficiencies that will reduce the production cost of glyphosate. As part of this strategy, we have entered into agreements to supply glyphosate to other herbicide producers. Such cost reductions will depend on realizing such increased volumes and technological innovations. Our ability to achieve our anticipated cost reductions will also depend upon input costs, such as raw materials and energy, remaining within our anticipated ranges.

Development and Introduction of New Products: Our ability to develop and introduce new products to market, particularly new agricultural biotechnology products, will depend on, among other things, the availability of sufficient financial resources to fund research and development needs; the success of our research and development efforts; our ability to gain and maintain acceptance through the chain of commerce (for example, from farmers, processors, food companies, and consumers); our ability to obtain regulatory approvals; the demonstrated effectiveness of our products; our ability to produce new products on a large scale and to market them economically; our ability to develop, purchase or license required technology; and the existence of sufficient distribution channels.

Government Regulation: The field testing, production, import, marketing and use of our products, particularly our seed biotechnology products, are subject to extensive regulation and numerous government approvals. Government regulations, regulatory systems, and the politics which influence them vary widely among jurisdictions. Obtaining necessary regulatory approval is time consuming and costly, and there can be no guarantee of the timing or success in obtaining approvals. For example, China's regulatory system is developing and unpredictable, resulting in continuing uncertainty about import of major U.S. crops such as soybeans containing biotechnology traits. If crops grown from seeds developed through biotechnology are not yet approved for import into certain markets, growers in other countries may be restricted from introducing or selling their grain. In addition, because there are markets that have not approved some products, some companies

in the grain and food industries have sought to establish supplies of non-genetically-modified crops, or have refused to purchase crops grown from seeds developed through biotechnology. Resulting concerns about trade and marketability of these products may deter farmers from planting them and can result in grower opposition to the introduction of new biotechnology products or approved traits in a new crop even in countries where planting and consumption may be fully approved.

In addition to delaying or preventing the sale or import of our products, regulatory authorities can order recalls, and prohibit, or place limits or conditions on, the planting of seeds containing biotechnology traits. Although weed resistance to various herbicides has occurred and is managed through proper use, stewardship and alternative weed control methods, government agencies could choose to restrict the use of herbicides and herbicide-tolerant crops, such as glyphosate and glyphosate-tolerant crops, in response to claims that increased use of the herbicide increases the potential for the development of weed resistance. Legislation or regulation may also require the tracking of biotechnology products and the labeling of food or feed products with ingredients grown from seeds containing biotechnology traits. In addition, international agreements, such as the Cartagena Biosafety Protocol which is in the process of ratification, may also affect the treatment of biotechnology products.

Public Acceptance: The commercial success of agricultural and food products developed through biotechnology will depend in part on public acceptance of their development, cultivation, distribution and consumption. Biotechnology has enjoyed and continues to enjoy substantial support from the scientific community, regulatory agencies, governmental officials, and grower communities around the world. However, public attitudes can be influenced by claims that genetically modified plant products are unsafe for consumption or that they pose unknown risks to the environment or to traditional social or economic practices, even if such claims are not based on scientific studies. These public attitudes can influence regulatory and legislative decisions about seed biotechnology, and they may also result in refusal to purchase products derived from biotechnology even where they are approved. The development, introduction and sale of our products have been, and may in the future be, delayed or impaired because of adverse public perception regarding the safety of our products and the potential effects of these products on other plants, animals, human health and the environment. We continue to work with consumers and customers to encourage understanding of modern biotechnology, crop protection, and agricultural biotechnology products.

Adventitious Presence of Biotechnology Traits: Because the global acceptance and regulation of biotechnology-derived agricultural products is not consistent or harmonized, the detection of unintended trace amounts (adventitious presence) of biotechnology traits in precommercial seed, seed varieties, or the grain and products produced can negatively affect our business or results of operations. The detection of adventitious presence can result in the withdrawal of seed lots from sale, or in governmental regulatory compliance actions such as crop destruction or product recalls.

Some growers of organic and conventional nonbiotechnology crops have claimed that the adventitious presence of biotechnology traits in their crops will cause them commercial harm. Concerns about the adventitious presence of biotechnology traits could lead to more stringent regulation, which may include: requirements for labeling and traceability; financial protection such as surety bonds, liability or insurance; and/or restrictions or moratoria on testing, planting or use of biotechnology traits. Concern about unintended biotechnology traits in grain or food has led to consumer concerns about the integrity of the food supply chain from the farm to the finished product. In addition, concerns have been expressed about the potential for adventitious presence of proteins in food, resulting from the development and production of pharmaceutical proteins in food-crop plants. Monsanto's Protein Technologies business is one of several businesses engaged in this research.

Together with other seed companies, biotechnology providers and industry associations, we are actively seeking sound, science-based rules and regulatory interpretations that would clarify the legal status of trace adventitious amounts of biotechnology traits in seed, grain and food, together with rigorous regulation that will prevent the presence of traits intended not to be in food or feed. This may involve the establishment of approval processes or threshold levels for the adventitious presence of biotechnology traits intended to be in food and feed, and standardized sampling and testing methods for all traits. Although we believe that thresholds for traits intended to be in food and feed crops are already implicit in existing seed quality and other laws, the establishment of appropriate regulations would provide the basis for recognition and acceptance of the adventitious presence of biotechnology traits. In the United States, the USDA and FDA are already coordinating to strengthen the regulation and confinement of traits intended not to be present in food or feed.

Intellectual Property: We have devoted significant resources to obtaining and maintaining our intellectual property rights, which are material to our business. We rely on a combination of patents, copyrights, trademarks and trade secrets, confidentiality provisions, Plant Variety Protection Act registrations, and licensing arrangements to establish and protect our intellectual property. We seek to preserve our intellectual property rights and to operate without infringing the proprietary rights of third parties. Intellectual property positions are extremely important within the agricultural biotechnology industry.

There is some uncertainty about the value of available patent protection in certain countries outside the United States, and patent protection may not be available in some countries. For example, we do not have patent protection for our *Roundup Ready* soybean traits in Argentina. Moreover, the patent positions of biotechnology companies involve complex legal and factual questions. Rapid technological advances and the number of companies performing such research can create an uncertain environment. Patent applications in the United States may be kept confidential, or if published like those outside the United States, published 18 months after filing. Accordingly, competitors may be issued patents from time to time without any prior warning to us. That could decrease or eliminate the value of similar technologies that

we are developing. Because of this rapid pace of change, some of our products may unknowingly rely on key technologies that are patent-protected by others. If that should occur, we must obtain licenses to such technologies to continue to use them.

Certain of our seed germplasm and other genetic material, patents, and licenses are currently the subject of litigation, and additional future litigation is anticipated. Although the outcome of such litigation cannot be predicted with certainty, we will continue to defend and litigate our positions vigorously. We believe that we have meritorious defenses and claims in the pending suits.

Technological Change and Competition: A number of companies are engaged in plant biotechnology research. Technological advances by others could render our products less competitive. In addition, the ability to be first to market a new product can result in a significant competitive advantage. We believe that competition will intensify, not only from agricultural biotechnology firms, but also from major agrichemical, seed and food companies with biotechnology laboratories. Some of our agricultural competitors have substantially greater financial and marketing resources than we do.

Weather and Natural Disasters: Our business is subject to weather conditions and natural disasters that affect commodity prices, seed yields, and grower decisions about purchases of seeds, traits and herbicides. The occurrence of adverse weather conditions or natural disasters in major markets can have a material adverse effect on our sales and profitability. In addition, natural disasters affecting our manufacturing facilities, our major suppliers or our major customers could have a material adverse effect on our financial results.

Planting Decisions: In order to successfully market our products, we must anticipate the planting decisions that growers will make for future crop seasons. Market and economic conditions affect growers' decisions about the types and amounts of crops to plant and may negatively affect sales of our herbicide, seed and biotechnology products. Failure to accurately predict the grower demand for specific products may also result in unanticipated returns, which could have a material adverse effect on our profitability.

Need for Short-Term Financing: Like many other agricultural companies, we regularly extend credit to our customers in certain areas of the world to enable them to acquire agricultural chemicals and seeds at the beginning of their growing seasons. Our credit practices, combined with the seasonality of our sales, make us dependent on our ability to obtain short-term financing to fund our cash flow requirements, our ability to collect customer receivables when due, and our ability to repatriate funds from ex-U.S. operations. Our need for short-term financing typically peaks in the second quarter. Downgrades in our credit rating or other limitations on our ability to access short-term financing, including our ability to refinance our short-term debt as it becomes due, would increase our interest costs and adversely affect our sales and our profitability.

Litigation and Contingencies: We are involved in numerous major lawsuits regarding contract disputes, intellectual property issues, biotechnology issues, antitrust allegations, and other matters. Adverse outcomes could subject us to substantial damages or limit our ability to sell our products. In addition, in connection with the separation of our businesses from those of Pharmacia Corporation on Sept. 1, 2000, and pursuant to a Separation Agreement entered into on that date and subsequently amended, we assumed, and agreed to indemnify Pharmacia for, any liabilities primarily related to Pharmacia's former agricultural or chemical businesses. Under the Separation Agreement, as amended, we agreed to indemnify Pharmacia for any liabilities that Solutia Inc. (Solutia) had assumed from Pharmacia in connection with the spinoff of Solutia on Sept. 1, 1997, to the extent that Solutia fails to pay, perform or discharge those liabilities. This indemnification obligation applies to litigation, environmental, retiree and all other Pharmacia liabilities that were assumed by Solutia. To the extent that Solutia encounters material liquidity or other financial constraints, the risk that it would be unable to pay, perform or discharge its assumed liabilities or to satisfy its indemnity obligations to Pharmacia, and that we would be called upon to do so, would increase.

Distribution of Products: In order to successfully market our products, we must estimate growers' needs, and successfully match the level of product at our distributors to those needs. If distributors do not have enough inventory of our products at the right time, our current sales will suffer. On the other hand, high product inventory levels at our distributors may cause revenues to suffer materially in future periods as these distributor inventories are worked down. Distributors may also elect to reduce their inventory levels from current levels, which could have a material adverse effect on our sales volumes. High product inventories at our distributors also increases the risk of obsolescence and product returns with respect to our seed products.

Cost Management: Our ability to meet our short- and long-term objectives requires that we manage our costs successfully, without adversely affecting our performance. Changing business conditions or practices may require us to reduce costs to remain competitive. If we are unable to identify cost savings opportunities and successfully reduce costs and maintain cost reductions, our profitability will be affected. Our profitability will also be affected to the extent that we incur cost increases, such as increased costs of raw materials or energy, which we are not able to manage or to offset through price increases in our products.

Accounting Policies and Estimates: In accordance with generally accepted accounting principles, we adopt certain accounting policies, such as policies related to the timing of revenue recognition and other policies described in our financial statements. Changes to these policies may affect future results. There may also be changes to generally accepted accounting principles, which may require adjustments to financial statements for prior periods and changes to the company's accounting policies and financial results prospectively. In addition, we must use certain estimates, judgments and assumptions in order to prepare our financial

statements. For example, we must estimate matters such as: collectibility of receivables; levels of returns; future obsolescence of inventories; realization of deferred tax assets; asset impairment; valuation of pension and other postretirement assets and liabilities; and the probability and amount of other future liabilities. If actual experience differs from our estimates, adjustments will need to be made to financial statements for future periods, which may affect revenues and profitability. Finally, changes in our business practices may result in changes to the way we account for transactions, and may affect comparability between periods.

Operations Outside the United States: Sales outside the United States make up a substantial portion of our revenues, and we intend to continue to actively explore international sales opportunities. In addition, we engage in manufacturing, seed production, sales, and/or research and development in many parts of the world. Although we have operations in virtually every region, our ex-U.S. sales are principally in Argentina, Brazil, Canada, France and Mexico. Accordingly, developments in those parts of the world generally have a more significant effect on our operations than developments in other places. Operations outside the United States are potentially subject to a number of unique risks and limitations, including, among others, fluctuations in currency values and foreign-currency exchange rates; exchange control regulations; changes in a specific country's or region's political or economic conditions; weather conditions; import and trade restrictions; import or export licensing requirements and trade policy; unexpected changes in regulatory requirements; restrictions on the ability to repatriate funds; and other potentially detrimental domestic and foreign governmental practices or policies affecting U.S. companies doing business abroad. Acts of terror or war may impair our ability to operate in particular countries or regions, and may impede the flow of goods and services between countries. Weakened economies may cause future sales to decrease because customers may purchase fewer goods in general, and also because imported products could become more expensive for customers to purchase in their local currency. Changes in exchange rates may affect our earnings, the book value of our assets outside the United States, and our equity.

Shareowner Matters

On Dec. 18, 2002, Monsanto declared a quarterly dividend on its common stock of \$0.12 per share payable on Jan. 31, 2003, to shareowners of record on Jan. 10, 2003. On Feb. 19, 2003, Monsanto declared a quarterly dividend on its common stock of \$0.12 per share payable on May 1, 2003, to shareowners of record on April 8, 2003. The dividend rate reflects a policy adopted by the board of directors following the IPO. Monsanto's common stock is traded principally on the New York Stock Exchange. The number of shareowners of record as of Feb. 21, 2003, was 60,200.

Statement of Consolidated Operations

(Dollars in millions, except per share and per pro forma share amounts) Year Ended Dec. 31,	2002	2001	2000
Net Sales	\$4,673	\$5,462	\$5,493
Cost of goods sold	2,493	2,817	2,770
Gross Profit	2,180	2,645	2,723
Operating Expenses:			
Selling, general and administrative expenses	1,023	1,141	1,195
Bad-debt expense	208	42	58
Research and development expenses	527	560	588
Amortization and adjustments of goodwill	—	121	212
Restructuring charges — net	103	122	103
Total Operating Expenses	1,861	1,986	2,156
Income From Operations	319	659	567
Interest expense (net of interest income of \$22, \$26 and \$30 in 2002, 2001 and 2000, respectively)	59	73	184
Other expense — net	58	127	49
Income Before Income Taxes and Cumulative Effect of Accounting Change	202	459	334
Income tax provision	73	164	159
Income Before Cumulative Effect of Accounting Change	129	295	175
Cumulative effect of a change in accounting principle, net of tax benefit of \$162 in 2002 and \$16 in 2000	(1,822)	—	(26)
Net Income (Loss)	\$(1,693)	\$295	\$149
Basic Earnings (Loss) per Share (per Pro Forma Share in 2000):			
Income before cumulative effect of accounting change	\$0.49	\$1.14	\$0.68
Cumulative effect of accounting change	(6.99)	—	(0.10)
Net Income (Loss)	\$(6.50)	\$1.14	\$0.58
Diluted Earnings (Loss) per Share (per Pro Forma Share in 2000):			
Income before cumulative effect of accounting change	\$0.49	\$1.12	\$0.68
Cumulative effect of accounting change	(6.94)	—	(0.10)
Net Income (Loss)	\$(6.45)	\$1.12	\$0.58

The accompanying notes are an integral part of these consolidated financial statements.

Statement of Consolidated Financial Position

(Dollars in millions, except share amounts) As of Dec. 31,	2002	2001
Assets		
Current Assets:		
Cash and cash equivalents	\$ 428	\$ 307
Short-term investments	250	—
Trade receivables (net of allowances of \$247 in 2002 and \$177 in 2001)	1,752	2,307
Miscellaneous receivables	389	449
Related-party loan receivable	—	30
Related-party receivable	—	44
Deferred tax assets	260	251
Inventories	1,272	1,357
Other current assets	73	52
Total Current Assets	4,424	4,797
Property, Plant and Equipment:		
Land	69	68
Buildings	925	947
Machinery and equipment	3,042	3,127
Computer software	258	233
Construction in progress	292	362
Total Property, Plant and Equipment	4,586	4,737
Less Accumulated Depreciation	2,247	2,110
Net Property, Plant and Equipment	2,339	2,627
Goodwill	757	2,748
Other Intangible Assets (Net of Accumulated Amortization of \$504 in 2002 and \$619 in 2001)	643	691
Other Assets	727	566
Total Assets	\$ 8,890	\$11,429
Liabilities and Shareowners' Equity		
Current Liabilities:		
Short-term debt	\$ 393	\$ 563
Related-party short-term loans payable	—	254
Accounts payable	275	457
Related-party payable	—	87
Accrued compensation and benefits	73	136
Accrued marketing programs	312	197
Deferred revenues	148	72
Grower accruals	98	104
Miscellaneous short-term accruals	511	507
Total Current Liabilities	1,810	2,377
Long-Term Debt	851	893
Postretirement Liabilities	817	365
Other Liabilities	232	311
Commitments and Contingencies (see Note 20)		
Shareowners' Equity:		
Common stock (authorized: 1,500,000,000 shares, par value \$0.01)		
Shares issued: 261,412,808 in 2002 and 258,112,408 in 2001	3	3
Additional contributed capital	8,050	8,056
Retained earnings (deficit)	(1,645)	173
Accumulated other comprehensive loss	(1,202)	(716)
Reserve for ESOP debt retirement	(26)	(33)
Total Equity	5,180	7,483
Total Liabilities and Shareowners' Equity	\$ 8,890	\$11,429

The accompanying notes are an integral part of these consolidated financial statements.

Statement of Consolidated Cash Flows

(Dollars in millions) Year Ended Dec. 31,	2002	2001	2000
Operating Activities:			
Net Income (Loss)	\$(1,693)	\$ 295	\$ 149
Adjustments to reconcile cash provided (required) by operations:			
Items that did not require (provide) cash:			
Pretax cumulative effect of change in accounting principle	1,984	—	42
Depreciation and amortization expense	460	554	546
Bad-debt expense	208	42	58
Noncash restructuring and other special items	50	122	195
Deferred income taxes	(258)	5	179
(Gain) loss on disposal of investments and property — net	(59)	(16)	2
Equity affiliate expense — net	43	41	34
Write-off of retired assets	28	20	—
Changes in assets and liabilities that provided (required) cash:			
Trade receivables	221	(224)	(653)
Inventories	74	(187)	118
Accounts payable and accrued liabilities	(3)	(194)	28
Related-party transactions	(46)	161	(35)
Tax benefit on employee stock options	11	—	—
Deferred revenue on supply agreements	42	—	—
Net investment hedge proceeds	20	—	—
Other items	26	(3)	8
Net Cash Provided by Operations	1,108	616	671
Cash Flows Provided (Required) by Investing Activities:			
Property, plant and equipment purchases	(224)	(382)	(582)
Acquisitions and investments	(347)	(81)	(148)
Investment and property disposal proceeds	72	10	—
Loans with related party	30	20	(205)
Net Cash Required by Investing Activities	(469)	(433)	(935)
Cash Flows Provided (Required) by Financing Activities:			
Net change in short-term financing	(934)	372	(993)
Loans from related party	(254)	(226)	635
Long-term debt proceeds	856	57	—
Long-term debt reductions	(104)	(94)	(58)
Debt issuance costs	(10)	—	—
Payments on vendor financing	(10)	—	—
Stock option exercises	63	—	—
Dividend payments	(125)	(116)	—
Issuance of stock	—	—	723
Net transactions with Pharmacia	—	—	62
Net Cash Provided (Required) by Financing Activities	(518)	(7)	369
Net Increase in Cash and Cash Equivalents	121	176	105
Cash and Cash Equivalents at Beginning of Year	307	131	26
Cash and Cash Equivalents at End of Year	\$ 428	\$ 307	\$ 131

See Note 19 — Supplemental Cash Flow Information — for further details.

The accompanying notes are an integral part of these consolidated financial statements.

Statement of Consolidated Shareowners' Equity

(Dollars in millions, except per share amounts)	Common Stock	Additional Contributed Capital	Parent Company Net Investment	Retained Earnings (Deficit)	Accumulated Other Comprehensive Income (Loss) ⁽¹⁾	Reserve for ESOP Debt	Total
Balance as of Jan. 1, 2000	\$ —	\$ —	\$ 4,926	\$ —	\$ (281)	\$ —	\$ 4,645
Net income through Aug. 31, 2000	—	—	124	—	—	—	124
Net transactions with Pharmacia ⁽²⁾	—	—	318	—	(104)	—	214
Capitalization of Monsanto from Pharmacia (1,000 shares) ⁽³⁾	2	5,366	(5,368)	—	—	—	—
Debt exchanged for additional Pharmacia capital contribution	—	1,765	—	—	(15)	(38)	1,712
Common stock issued on Oct. 23, 2000 (38,033,000 shares)	1	722	—	—	—	—	723
Grant of restricted stock (10,000 shares)	—	—	—	—	—	—	—
Net income from Sept. 1, 2000, through Dec. 31, 2000	—	—	—	25	—	—	25
Cash dividend of \$0.09 per common share	—	—	—	(23)	—	—	(23)
Foreign currency translation	—	—	—	—	(107)	—	(107)
Net unrealized gain on investments	—	—	—	—	27	—	27
Minimum pension liability	—	—	—	—	1	—	1
Balance as of Dec. 31, 2000	\$ 3	\$ 7,853	\$ —	\$ 2	\$ (479)	\$ (38)	\$ 7,341
Net income	—	—	—	295	—	—	295
Net transactions with Pharmacia ⁽⁴⁾	—	201	—	—	(13)	—	188
Grants of restricted stock (45,500 shares)	—	2	—	—	—	—	2
Cash dividends of \$0.48 per common share	—	—	—	(124)	—	—	(124)
Foreign currency translation	—	—	—	—	(197)	—	(197)
Net unrealized loss on investments	—	—	—	—	(24)	—	(24)
Accumulated derivative loss	—	—	—	—	(8)	—	(8)
Allocation of ESOP shares	—	—	—	—	—	5	5
Minimum pension liability	—	—	—	—	5	—	5
Balance as of Dec. 31, 2001	\$ 3	\$ 8,056	\$ —	\$ 173	\$ (716)	\$ (33)	\$ 7,483
Net loss	—	—	—	(1,693)	—	—	(1,693)
Net transactions with Pharmacia ⁽⁵⁾	—	(83)	—	—	—	—	(83)
Grants of restricted stock (147,000 shares)	—	3	—	—	—	—	3
Issuance of shares under employee stock plans	—	63	—	—	—	—	63
Tax benefit on employee stock options	—	11	—	—	—	—	11
Cash dividends of \$0.48 per common share	—	—	—	(125)	—	—	(125)
Foreign currency translation	—	—	—	—	(273)	—	(273)
Minimum pension liability	—	—	—	—	(202)	—	(202)
Net unrealized loss on investments	—	—	—	—	(11)	—	(11)
Allocation of ESOP shares	—	—	—	—	—	7	7
Balance as of Dec. 31, 2002	\$ 3	\$ 8,050	\$ —	\$ (1,645)	\$ (1,202)	\$ (26)	\$ 5,180

(1) The components of accumulated other comprehensive income (loss) included accumulated foreign currency translations of \$(987) million, \$(714) million, and \$(504) million for 2002, 2001, and 2000, respectively; net unrealized gains on investments, net of taxes, of \$4 million, \$15 million, and \$39 million for 2002, 2001, and 2000, respectively; net accumulated derivative loss, net of taxes, of \$(8) million in 2002 and 2001; and minimum pension liability, net of taxes, of \$(211) million, \$(9) million, and \$(14) million in 2002, 2001, and 2000.

(2) Includes adjustments to reflect determination of the historical amounts of net assets related to accumulated foreign currency translation adjustments.

(3) In September 2000, Monsanto shares were split; Pharmacia received 219,999 shares for each share held. After the separation, Pharmacia held 220 million shares, which were distributed to Pharmacia shareowners via a tax-free dividend on Aug. 13, 2002.

(4) Includes adjustments to reflect determination of deferred tax assets and accumulated foreign currency translation adjustments.

(5) Includes adjustment primarily associated with the assumed net pension liabilities and related deferred tax assets.

Statement of Consolidated Comprehensive Income (Loss)

(Dollars in millions) Year Ended Dec. 31,	2002	2001	2000
Net Income (Loss)	\$(1,693)	\$ 295	\$ 149
Other Comprehensive Income (Loss):			
Foreign currency translation adjustments	(273)	(197)	(107)
Unrealized net holding gains (losses) (net of tax of \$(2) in 2002, \$(13) in 2001 and \$15 in 2000)	(4)	(20)	23
Reclassification adjustment for holding (gains) losses included in income (net of tax of \$(5) in 2002, \$(2) in 2001, and \$3 in 2000)	(7)	(4)	4
Accumulated derivative losses on cash-flow hedges not yet realized (net of tax of \$(5) in both 2002 and 2001)	(8)	(8)	—
Reclassification adjustment for derivative losses included in income (net of tax of \$5 in 2002)	8	—	—
Additional minimum pension liability adjustment (net of tax of \$(109) in 2002, \$3 in 2001, and \$1 in 2000)	(202)	5	1
Total Other Comprehensive Loss	(486)	(224)	(79)
Total Comprehensive Income (Loss)	\$(2,179)	\$ 71	\$ 70

The accompanying notes are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

NOTE 1

Background and Basis of Presentation

Monsanto Company is a leading global provider of agricultural products and integrated solutions for farmers. Monsanto makes *Roundup* herbicide and other herbicides. The company produces leading seed brands, including *DEKALB* and *Asgrow*, and provides farmers and other seed companies with biotechnology traits for insect protection and herbicide tolerance. Monsanto's herbicides, seeds, and related biotechnology trait products can be combined to provide growers with integrated solutions that improve productivity and reduce the costs of farming. Monsanto also provides lawn-and-garden herbicides for the residential market and animal agricultural products focused on improving dairy cow productivity and swine genetics.

Monsanto manages its business in two segments: Agricultural Productivity, and Seeds and Genomics. The Agricultural Productivity segment consists of the crop protection products, animal agriculture, lawn-and-garden herbicides, and environmental technologies businesses. The Seeds and Genomics segment consists of the global seeds and related traits businesses, and biotechnology platforms.

Monsanto comprises the operations, assets and liabilities that were previously the agricultural business of Pharmacia Corporation (Pharmacia). Monsanto was originally incorporated in February 2000 as a subsidiary of Pharmacia. On Sept. 1, 2000, the assets and liabilities of the agricultural business were transferred from Pharmacia to Monsanto, pursuant to the terms of a separation agreement dated as of that date. The consolidated financial statements for all periods prior to Sept. 1, 2000, were prepared on a carve-out basis to reflect the historical operating results, assets, liabilities, and cash flows of the agricultural business operations. The costs of certain services and debt service provided by Pharmacia included in the Statement of Consolidated Operations for these periods were allocated to Monsanto based on methodologies that management believes to be reasonable, but which do not necessarily reflect what the results of operations, financial position, or cash flows would have been had Monsanto been a separate, stand-alone entity before Sept. 1, 2000.

Beginning Sept. 1, 2000, the consolidated financial statements reflect the results of operations, financial position, and cash flows of the company as a separate entity responsible for procuring or providing the services and financing previously provided by Pharmacia. The consolidated financial statements also include the costs of services purchased from Pharmacia and the reimbursement for services provided to Pharmacia pursuant to a transition services agreement.

In October 2000, Monsanto sold approximately 15 percent of its common stock at \$20 per share in an initial public offering (IPO). On Aug. 13, 2002, Pharmacia completed a spinoff of Monsanto by distributing its entire ownership interest via a tax-free dividend to Pharmacia's shareowners.

As described in Notes 13, 14, 15 and 16 to the consolidated financial statements, Monsanto employees and retirees participate in various pension, health care, savings, and other benefit plans. Costs related to those plans attributable to Monsanto that are included in the consolidated financial statements for the periods prior to Sept. 1, 2000, are generally based upon Monsanto's percentage of total payroll costs. From Sept. 1, 2000, through Jan. 1, 2002, Monsanto employees were covered by pension and stock-based compensation plans sponsored either by Monsanto or Pharmacia. Since Jan. 1, 2002, Monsanto employees have participated in pension, health care and other benefit plans sponsored by Monsanto.

Unless otherwise indicated, "Monsanto" and "the company" are used interchangeably to refer to Monsanto Company or to Monsanto Company and consolidated subsidiaries, as appropriate to the context. With respect to periods prior to the separation of Monsanto's business from those of Pharmacia on Sept. 1, 2000, references to "Monsanto," "Monsanto Company" or "the company" also refer to the agricultural business of Pharmacia.

NOTE 2

Significant Accounting Policies

Basis of Consolidation

The consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States. These statements pertain to Monsanto and its controlled subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation. Investments in other companies over which Monsanto has the ability to exercise significant influence (generally through an ownership interest greater than 20 percent) are included in other assets in the Statement of Consolidated Financial Position. Monsanto's share of these companies' net earnings or losses is included in other expense (net) in Monsanto's Statement of Consolidated Operations.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make certain estimates and assumptions that affect the amounts reported in the consolidated financial

statements and accompanying notes. Estimates are adjusted to reflect actual experience when necessary. Significant estimates and assumptions are used to account for allowances for doubtful trade accounts receivable, sales returns and allowances, inventory obsolescence, income tax liabilities and assets and related valuation allowances, asset impairments, employee benefit plan liabilities, marketing program liabilities, grower accruals (estimate of amount payable to farmers who grow seed for Monsanto), restructuring reserves, self-insurance reserves, environmental reserves, deferred revenue, contingencies, and the allocation of corporate costs to segments. Significant estimates and assumptions also are used to establish useful lives of depreciable tangible and certain intangible assets. Actual results may differ from those estimates and assumptions, and such results may affect income, financial position or cash flows.

Revenue Recognition

The company derives most of its revenue from three main sources: sales of agricultural chemical products; sales of branded conventional seed and branded seed with biotechnology traits; and royalties and license revenues from licensed biotechnology traits and genetics.

Revenues for agricultural chemical products are recognized when title to the products is transferred and the goods are deemed delivered to customers. The company recognizes revenue on products it sells to distributors when, according to the terms of the sales agreements, delivery has occurred, performance is complete, no right of return exists, and pricing is fixed or determinable at the time of sale.

Revenues from all branded seed sales are recognized when the title to the products is transferred, at which time the goods are deemed delivered. When the right of return exists, sales revenues are reduced at the time of sale to reflect expected returns, which are estimated based on historical experience and current market conditions.

In 2000, Monsanto adopted Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, the Securities and Exchange Commission's (SEC) interpretation of accounting guidelines on revenue recognition. The adoption of SAB 101 primarily affected the company's recognition of license revenues from corn and soybean biotechnology traits sold through third-party seed companies. Monsanto restated license revenues in 2000, recognizing them when a grower purchases seed. The previous practice was to recognize the license revenue when the third-party seed company sold the seed into the distribution system. SAB 101 required companies to report any change in revenue recognition related to adopting its provisions as an accounting change in accordance with Accounting Principles Board (APB) Opinion No. 20, *Accounting Changes*. Monsanto recognized the cumulative effect of a change in accounting principle as a loss of \$26 million, net of taxes of \$16 million, effective Jan. 1, 2000.

Starting in the third quarter of 2001, Monsanto changed its marketing approach on certain trait fees. It replaced the technology fee paid by growers who plant *YieldGard* insect-protected corn, *Roundup Ready* corn and *Roundup Ready* soybeans, with a royalty paid by the seed companies that are licensed to market those products. This change resulted in trait revenues being recognized

earlier — from the first half of 2002 to the second half of 2001, which had a \$0.34 positive effect on 2001 diluted earnings per share, or \$90 million on net income, and a comparable negative effect on 2002 results. Royalties are recorded when earned, usually when the third-party seed companies sell their seeds containing Monsanto traits. License revenues are earned on certain traits, primarily cotton and canola biotechnology traits in certain geographic locations, and are recognized when growers purchase the seed containing the Monsanto trait.

Additional conditions for recognition of revenue are that the collection of sales proceeds be reasonably assured based on historical experience and current market conditions, that pricing is fixed or determinable, and that there are no further performance obligations under the sale, or royalty or license agreement.

During 2001, to reduce credit exposure in Latin America, Monsanto began to collect payments on certain customer accounts in grain. In accordance with Emerging Issues Task Force (EITF) Issue 99-19, *Reporting Revenue Gross As a Principal and Net As an Agent*, the company recorded revenues of approximately \$65 million in the Seeds and Genomics segment during the year ended Dec. 31, 2001, for the sale of grain received as payment on account from customers. Revenue on sale of grain was virtually offset by cost of sales; there was minimal contribution to gross profit. During 2002, the company changed this program so Monsanto no longer takes ownership of the grain, thereby eliminating the subsequent sale of grain and the associated inventory risk. Such payments in grain, negotiated at the time Monsanto's products were sold to the customers, were valued at the prevailing grain commodity prices on that day. By entering into forward sales contracts with grain merchants, Monsanto protects itself from the commodity price exposure from the time a contract is signed with a customer until the grain is collected from the customer by a grain merchant on Monsanto's behalf.

Income Taxes

Monsanto's operating results have been included in the consolidated federal and state income tax returns filed by Pharmacia and its subsidiaries in various U.S. and ex-U.S. jurisdictions. Following completion of the IPO of Monsanto stock and through the spinoff on Aug. 13, 2002, as described in Note 1 — Background and Basis of Presentation — Monsanto continued to be included in the Pharmacia consolidated group because Pharmacia beneficially owned at least 80 percent of the total voting power and value of Monsanto's common stock. Following completion of the spinoff, Monsanto is no longer included in the Pharmacia consolidated group. Monsanto will file its own income tax returns in all U.S. and ex-U.S. jurisdictions. The tax provisions reflected in Monsanto's Statement of Consolidated Operations have been computed as if Monsanto were a separate taxpayer for all periods presented.

Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts. Management assesses the likelihood that deferred tax assets will be recovered from future taxable income and to the extent that management believes such recovery is not likely, a valuation allowance is established. To the extent that a valuation allowance is established, increased or decreased, an income tax charge or benefit is included in the

consolidated financial statements. The net deferred tax assets as of Dec. 31, 2002, represent the estimated future tax benefits to be received from taxing authorities or future reductions of taxes payable.

Marketing and Advertising Costs

Marketing and advertising costs are expensed as incurred. Accrued marketing programs are based upon specific performance criteria achieved by distributors, dealers and farmers, such as purchase volumes, promptness of payment, and market share increases. The associated cost of marketing programs is recognized as a reduction of gross sales in the Statement of Consolidated Operations. Advertising costs are included in selling, general and administrative expenses in the Statement of Consolidated Operations.

Cash and Cash Equivalents

All highly liquid investments (investments with a maturity of three months or less at date of purchase) are considered cash equivalents. Beginning in 2001, cash equivalents include customer payments in transit at the end of the reporting period.

Short-Term Investments

Short-term investments consist primarily of U.S. Treasury bills, other government securities, and commercial paper. These investments are designated as available for sale and are stated at market value. For purposes of the Statements of Consolidated Financial Position and Consolidated Cash Flows, these short-term investments are not considered cash equivalents, because their original maturities are more than three months from the date of issuance.

Accounts Receivable

The company provides an allowance for doubtful accounts equal to the estimated uncollectible amounts. That estimate is based on historical collection experience, current economic and market conditions, and a review of the current status of each customer's trade accounts receivable.

Long-Term Investments

Monsanto has long-term investments in equity securities, all of which are considered to be available for sale. They are classified as other assets in the Statement of Consolidated Financial Position, and they are carried at fair value, with unrealized gains and losses reported in the Statement of Consolidated Shareowners' Equity in accumulated other comprehensive loss. Each security is reviewed regularly to evaluate whether it has experienced an other-than-temporary decline in fair value. If the company believes that an other-than-temporary decline exists, the investment in question is written down to market value. The write-down is recorded as an impairment of securities in our Statement of Consolidated Operations.

Fair Values of Financial Instruments

The recorded amounts of cash, trade receivables, investments in securities, miscellaneous receivables, third-party guarantees, commodity futures contracts, accounts payable, grower accruals, accrued marketing programs, related-party receivables and payables, related-party loans, miscellaneous short-term accruals, and short-term debt approximate their fair values. Fair values are

estimated by the use of quoted market prices, estimates obtained from brokers, and other appropriate valuation techniques based on information available at year-end. The fair value estimates do not necessarily reflect the values that could be realized in the current market on any one day. See Note 12 — Financial Instruments — for further details.

Inventory Valuation

Inventories are stated at the lower of cost or market. Actual cost is used to value raw materials and supplies. Standard cost, which approximates actual cost, is used to value finished goods and goods in process. Standard cost includes direct labor and raw materials, and manufacturing overhead based on practical capacity. The cost of certain inventories (approximately 33 percent as of Dec. 31, 2002, and 32 percent as of Dec. 31, 2001) is determined by using the last-in, first-out (LIFO) method, which generally reflects the effects of inflation or deflation on cost of goods sold sooner than other inventory cost methods. The cost of other inventories generally is determined by the first-in, first-out (FIFO) method. Inventories at FIFO approximate current cost.

Goodwill

Under Statement of Financial Accounting Standards (SFAS) No. 142, *Goodwill and Other Intangible Assets*, all goodwill amortization ceased effective Jan. 1, 2002. Rather, goodwill is now subject only to impairment reviews. A fair-value-based test will be applied at the reporting unit level, which is generally one level below the segment level. This test requires various judgments and estimates. A goodwill impairment loss will be recorded for any goodwill that is determined to be impaired. Goodwill will be tested for impairment at least annually in the third quarter. See Note 3 — New Accounting Standards — for further details.

Other Intangible Assets

Other intangible assets include seed germplasm, acquired biotechnology intellectual property, and trademarks. Acquired biotechnology intellectual property includes intangible assets related to acquisitions and licenses, through which Monsanto has acquired the rights to various research and discovery technologies encompassing enabling processes, data libraries, and patents necessary to support the integrated genomics and biotechnology platforms. These intangible assets have alternative future uses. Included in other intangible assets is a nonamortizing intangible asset associated with the recognition of minimum pension liabilities. In accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, all intangible assets are assessed for impairment whenever events indicate a possible loss. Such assessment involves an estimate of undiscounted cash flows over the remaining useful life of the intangible. If this review indicates that undiscounted cash flows are less than the recorded value of the intangible asset, the carrying amount of the intangible is reduced by the estimated cash-flow shortfall on a discounted basis, with a corresponding loss charged to the Statement of Consolidated Operations.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Additions and improvements are capitalized, and include all material, labor and engineering costs to design, install or improve the asset. Interest costs on construction projects are also capitalized. These costs are carried as construction in progress until the asset is ready for its intended use, at which time the costs are transferred to land, buildings, or machinery and equipment. Routine repairs and maintenance are expensed as incurred. The cost of plant and equipment is depreciated using the straight-line method over the estimated useful life of the asset — weighted-average periods of 18 years for buildings, and 10 years for machinery and equipment. Long-lived assets are reviewed for impairment whenever in management's judgment conditions indicate a possible loss. Such impairment tests compare estimated undiscounted cash flows to the recorded value of the asset. If an impairment is indicated, the asset is written down to its fair market value, or if fair market value is not readily determinable, to its estimated discounted cash flows.

Environmental Remediation Liabilities

Monsanto follows Statement of Position 96-1, *Environmental Remediation Liabilities*, which provides guidance for recognizing, measuring and disclosing environmental remediation liabilities. Monsanto accrues these costs in the period when responsibility is established and when such costs are probable and reasonably estimable based on current law and existing technology. Postclosure and remediation costs for hazardous waste sites and other waste facilities at operating locations are accrued over the estimated life of the facility, as part of its anticipated closure cost.

Foreign Currency Translation

The financial statements for most of Monsanto's ex-U.S. operations are translated into U.S. dollars at current exchange rates. For assets and liabilities the year-end rate is used. For revenues, expenses, gains and losses the average rate for the period is used. Unrealized currency adjustments in the Statement of Consolidated Financial Position are accumulated in equity as a component of accumulated other comprehensive loss. The financial statements of ex-U.S. operations in highly inflationary economies are translated at either current or historical exchange rates, in accordance with SFAS No. 52, *Foreign Currency Translation*. These currency adjustments are included in net income. As of Jan. 1, 2002, Monsanto identified Turkey, Russia, Romania and Ukraine as hyperinflationary countries in which it has operations.

Significant translation exposures are the Brazilian real, the euro, and the Canadian dollar. Other translation exposures include the Polish zloty, the U.K. pound sterling, and the Australian dollar. For all periods presented, Monsanto designated the U.S. dollar as the functional currency in Argentina. In January 2002, Argentina formally abandoned the fixed exchange rate regime between the Argentine peso and the U.S. dollar, and the peso subsequently was devalued by approximately 70 percent. Argentina simultaneously imposed various banking and exchange controls, and the government has instituted additional controls since that time. Included in the net transaction loss were losses of \$34 million in 2002 and \$15 million in 2001. These amounts reflect the effect

of this devaluation on Argentine peso-denominated transaction exposures (primarily value-added taxes and other taxes due to or recoverable by Monsanto). See Note 20 — Commitments and Contingencies — for further details on the Argentine devaluation. Currency restrictions, with a possible exception in Argentina, are not expected to have a significant effect on Monsanto's cash flow, liquidity, or capital resources.

Derivatives and Other Financial Instruments

Monsanto uses derivative financial instruments to limit its exposure to changes in foreign currency exchange rates, commodity prices, and interest rates. Monsanto participated in a foreign currency risk management program sponsored by Pharmacia through the spinoff on Aug. 13, 2002. Since then, Monsanto has maintained a consistent strategy by working with third-party banks. Monsanto does not use derivative financial instruments for trading purposes, nor does it engage in commodity or interest rate speculation. Monsanto monitors its underlying market risk exposures on an ongoing basis, and it believes that it can modify or adapt its hedging strategies as needed.

In accordance with SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, all derivatives, whether designated in hedging relationships or not, are recognized in the Statement of Consolidated Financial Position at their fair value. At the time a derivative contract is entered into, Monsanto designates each derivative as (1) a hedge of the fair value of a recognized asset or liability (a fair-value hedge), (2) a hedge of a forecasted transaction or of the variability of cash flows that are to be received or paid in connection with a recognized asset or liability (a cash-flow hedge), (3) a foreign-currency fair-value or cash-flow hedge (a foreign-currency hedge), (4) a foreign-currency hedge of the net investment in a foreign subsidiary, or (5) a derivative that does not qualify for hedge accounting treatment.

Changes in the fair value of a derivative that is highly effective as, and that is designated as and qualifies as a fair-value hedge, along with changes in the fair value of the hedged asset or liability that are attributable to the hedged risk, are recorded currently in earnings. Changes in the fair value of a derivative that is highly effective as, and that is designated as and qualifies as a cash-flow hedge, to the extent that the hedge is effective, are recorded in accumulated other comprehensive loss, until earnings are affected by the variability from cash flows of the hedged item. Any hedge ineffectiveness is included in current-period earnings. Changes in the fair value of a derivative that is highly effective as, and that is designated as and qualifies as a foreign-currency hedge, are recorded in either current-period earnings or accumulated other comprehensive loss, depending on whether the hedging relationship satisfies the criteria for a fair-value or cash-flow hedge. Changes in the fair value of a derivative that is highly effective as, and that is designated as a foreign-currency hedge of the net investment in a foreign subsidiary, are recorded in the accumulated foreign currency translation. Changes in the fair value of derivative instruments not designated as hedges are reported currently in earnings.

Monsanto formally documents all relationships between hedging instruments and hedged items, as well as its risk management objective and its strategy for undertaking various hedge transactions. This includes linking all derivatives that are designated as fair-value, cash-flow, or foreign-currency hedges either to specific assets and liabilities on the balance sheet, or to firm commitments or forecasted transactions. Monsanto formally assesses a hedge at its inception and on an ongoing basis to determine whether the hedge relationship between the derivative and the hedged item is highly effective, and whether it is expected to remain highly effective in future periods, in offsetting changes in fair value or cash flows. When derivatives cease to be highly effective hedges, Monsanto discontinues hedge accounting prospectively.

Interest rate swap agreements are used to reduce interest rate risks and to manage interest exposure. By entering into these agreements, Monsanto changes the interest rate mix (fixed/variable) of its debt portfolio. In both 2002 and 2001, the company also used natural gas swaps to manage energy input costs. Gains and losses were recorded in cost of goods sold and were immaterial to the consolidated financial statements for both years. As of Dec. 31, 2002, there was one open natural gas swap with a notional amount less than \$1 million. There were no open natural gas swaps as of Dec. 31, 2001.

Stock-Based Compensation

In December 2002, the Financial Accounting Standards Board (FASB) issued Statement No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure*, which amends SFAS No. 123, *Accounting for Stock-Based Compensation*, to provide alternative methods of transition for a voluntary change to the fair-value-based method of accounting for stock-based employee compensation. In addition, this Statement amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. As permitted by both SFAS 148 and SFAS 123, the company has elected to follow the guidance of APB Opinion No. 25, *Accounting for Stock Issued to Employees*, for measuring and recognizing its stock-based transactions with employees. Accordingly, no compensation expense was recognized for any of the Monsanto or Pharmacia option plans in which Monsanto employees participate. Pro forma disclosures of net income (loss) and earnings (loss) per share, as if the fair-value-based method of accounting had been applied, are presented in Note 16 — Stock-Based Compensation Plans — and include SFAS 148 required disclosures.

Compensation expense for restricted stock is based on the market price of Monsanto's common stock at the grant date; this expense is recognized over the vesting period.

Reclassifications

Certain prior-year amounts have been reclassified to conform with the current-year presentation.

NOTE 3

New Accounting Standards

In June 2001, the FASB simultaneously approved SFAS No. 141, *Business Combinations*, and SFAS No. 142, *Goodwill and Other Intangible Assets*. SFAS 141 requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001, thereby eliminating the pooling-of-interests method. SFAS 141 also provides broader criteria for identifying which types of acquired intangible assets must be recognized separately from goodwill and which must be included in goodwill. Monsanto adopted the provisions of SFAS 141 on Jan. 1, 2002, with earlier adoption of the requirement to use the purchase method of accounting for all business combinations initiated after June 30, 2001. SFAS 141 also required Monsanto to reassess the useful lives, residual values, and classification of all identifiable and recognized intangible assets. Any necessary prospective amortization period adjustments were made Jan. 1, 2002. See Note 8 — Goodwill and Other Intangible Assets — for further discussion of the reclassifications.

SFAS 142 changed the accounting for goodwill, from an amortization method to an impairment-only method. Under SFAS 142, all goodwill amortization ceased effective Jan. 1, 2002. In 2002, Monsanto performed a transitional goodwill impairment test as of January 1 and performed the annual impairment review during the third quarter. Goodwill will be tested at least annually in the third quarter. Under the new rules, Monsanto's recorded goodwill is tested for impairment at a level of reporting referred to as reporting units, which are components of the Agricultural Productivity, and Seeds and Genomics reporting segments. See Note 8 — Goodwill and Other Intangible Assets — for further discussion of the transitional impairment test, the annual impairment test, and additional details on Monsanto's goodwill and other intangible assets.

In July 2001, the FASB issued SFAS No. 143, *Accounting for Asset Retirement Obligations*. SFAS 143, which was effective for Monsanto on Jan. 1, 2003, addresses financial accounting for and reporting of costs and obligations associated with the retirement of tangible long-lived assets. Upon adopting this standard, in accordance with APB Opinion 20, Monsanto expects to record an aftertax cumulative effect of accounting change of approximately \$15 million. This noncash charge will be recorded as of Jan. 1, 2003. In addition, as required by SFAS 143, as of Jan. 1, 2003, net property, plant and equipment will be increased by approximately \$10 million, and asset retirement obligations (a component of noncurrent liabilities) of approximately \$30 million will be recorded. Annual aftertax depreciation expense is expected to increase by less than \$0.01 per share. Adoption of this standard is not expected to affect the company's liquidity or cash flow.

In August 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which replaces SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*. SFAS 144, which became effective for Monsanto on Jan. 1, 2002, establishes an

accounting model for long-lived assets to be disposed of by sale. It applies to all long-lived assets and discontinued operations. The adoption of SFAS 144 did not have a material effect on Monsanto's consolidated financial position or results of operations.

In April 2002, the FASB approved for issuance SFAS No. 145, *Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections*. SFAS 145 rescinds, updates, clarifies and simplifies existing accounting pronouncements. Among other things, SFAS 145 rescinds SFAS 4, which required all gains and losses from extinguishment of debt to be aggregated and, if material, classified as an extraordinary item, net of related income tax effect. Under SFAS 145, the criteria in APB Opinion No. 30, *Reporting the Results of Operations — Reporting the Effects of Disposal of a Segment of Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*, will now be used to classify those gains and losses. The adoption of SFAS 145 resulted in a reclassification of the extraordinary loss related to the extinguishment of Employee Stock Ownership Plan (ESOP) debt recorded in 2001 (\$2 million, net of taxes), to increase other expense by \$4 million, and to decrease the income tax provision by \$2 million. The adoption of the remaining provisions of SFAS 145 did not have a material effect on Monsanto's consolidated financial position or results of operations.

In July 2002, the FASB issued SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS 146 replaces EITF Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. SFAS 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred, rather than at the date the company commits itself to an exit or disposal plan. This statement is effective for exit or disposal activities initiated after Dec. 31, 2002. The adoption of SFAS 146 will not have an effect on Monsanto's existing restructuring actions, which were initiated prior to Dec. 31, 2002.

NOTE 4

Restructuring and Other Special Items

Restructuring and other special items were recorded in the Statement of Consolidated Operations as follows:

Dollars in millions	2002	2001	2000
Cost of Goods Sold	\$ (21)	\$ (82)	\$ (60)
Amortization and Adjustments of Goodwill	—	(2)	(88)
Selling, General and Administrative Expenses	—	(1)	—
Restructuring Charges — Net ⁽¹⁾	(103)	(122)	(103)
Other Expense — Net	—	(6)	(10)
Income (Loss) Before Income Taxes	(124)	(213)	(261)
Income Tax Benefit	43	76	64
Net Income (Loss)	\$ (81)	\$ (137)	\$ (197)

(1) Net of reversals of \$13 million, \$8 million, and \$4 million, in 2002, 2001, and 2000, respectively. Of the 2002 reversals, \$8 million were related to the 2000 restructuring plan, while \$5 million were related to the 2002 restructuring plan.

2002 Restructuring Plan (charges recorded in 2002)

In 2002, Monsanto's management approved a restructuring plan to further consolidate or shut down facilities and to reduce the work force. Under this plan, various research and development (R&D) programs and sites were shut down in the United States and Europe. This restructuring plan also involved the closure and downsizing of certain agricultural chemical manufacturing facilities in Asia-Pacific and the United States as a result of more efficient production capacity installed at other Monsanto manufacturing sites. Certain seed sites were consolidated within the United States and within Brazil, and certain U.S. swine facilities were exited. Finally, the plan included work force reductions in addition to those related to the facility closures. These additional reductions were primarily marketing and administrative positions in Asia-Pacific, Europe-Africa, and the United States.

In connection with this plan, Monsanto recorded \$132 million pretax (\$86 million aftertax) of net charges in 2002. The pretax components of the restructuring charge were as follows:

Dollars in millions	
Work Force Reductions	\$ 64
Facility Closures / Exit Costs	24
Asset Impairments:	
Property, plant and equipment	45
Inventories	6
Reversal of Restructuring Reserves	(5)
Recoverable Amount from a Third Party	(2)
Total Pretax Charge	\$132

These restructuring costs primarily relate to the closure of certain research and manufacturing sites, as well as work force reductions. The work force cost reductions include involuntary separation costs for approximately 1,140 employees worldwide, in marketing, manufacturing, R&D, and administration. The affected employees are entitled to receive severance benefits pursuant to established severance policies or to government labor regulations. As of Dec. 31, 2002, approximately 940 of the planned employee separations were completed. Approximately 780 of these employees received cash severance payments totaling \$34 million during 2002, and 160 employees elected deferred payments of \$14 million, which will be paid during the first quarter of 2003. The work force separation payments for the remaining 200 separated employees are expected to be completed by the end of 2003. Restructuring reversals of \$1 million were recorded for work force reductions, primarily because severance expenses were lower than originally estimated.

Facility closures and other exit costs included expenses associated with contract terminations (\$8 million), equipment dismantling and disposal (\$8 million), and other shutdown costs (\$8 million) resulting from the exit of certain research and manufacturing sites. The inventory write-off was associated with facility

closures and was recorded within cost of goods sold. The recoverable amount from a third party represents a portion of work force reduction and exit costs that will be reimbursed to Monsanto. The asset impairments were related to property, plant and equipment. Cash payments to complete these restructuring actions will be funded from operations; such payments are not expected to significantly affect the company's liquidity. Restructuring reversals of \$4 million were recorded for facility closures because costs were lower than originally estimated and because assets brought higher proceeds than originally estimated.

Activities related to the 2002 restructuring plan were as follows:

Dollars in millions	Work Force Reductions	Facility Closures	Asset Impairments	Other	Total
Additions	\$ 64	\$ 24	\$ 51	\$ (2)	\$ 137
Reversals	(1)	(4)	—	—	(5)
Costs Charged Against Reserves	(34)	(3)	—	—	(37)
Reclassification of Reserves to Other Balance Sheet Accounts:					
Inventories	—	—	(6)	—	(6)
Property, plant and equipment	—	—	(45)	—	(45)
Miscellaneous receivable	—	—	—	2	2
Dec. 31, 2002, Reserve Balance	\$ 29	\$ 17	\$ —	\$ —	\$ 46

2000 Restructuring Plan (charges recorded in 2001 and 2000)

In 2000, Monsanto's management formulated a plan as part of the company's overall strategy to focus on certain key crops and to streamline operations. Restructuring and other special items, primarily associated with the implementation of this plan, were recorded in 2000 and 2001. These charges totaled \$474 million pretax (\$334 million aftertax): \$261 million (\$197 million aftertax) recorded in 2000, and \$213 million (\$137 million aftertax) recorded in 2001.

The 2001 net charges were primarily for the streamlining of manufacturing operations, the discontinuation of certain seed hybrids, the elimination of noncore activities, and the exit of certain research programs. This plan also involved the closure and downsizing of certain agricultural chemical manufacturing facilities to eliminate duplicate manufacturing capacity to formulate and package herbicides. Due to geographical location and cost considerations, improved technologies were installed at other Monsanto manufacturing sites. These sites, improved by technological advancements, have increased their production capacity to meet current and expected demand for Monsanto's herbicides.

The pretax charge of \$213 million included the reversal of \$8 million of restructuring liabilities recorded during 2000 and 2001, primarily because severance expenses were lower than originally estimated. These charges were partially offset by the reversal of \$4 million of the 1998 restructuring liability, primarily because severance expenses were lower than originally estimated.

The pretax components of these net charges were as follows:

Dollars in millions	2001	2000
Work Force Reductions	\$ 50	\$ 61
Facility Closures/Exit Costs	49	9
Asset Impairments:		
Trade receivables	—	12
Inventories	45	60
Other current assets	6	—
Property, plant and equipment	57	22
Goodwill	2	88
Other intangible assets	3	3
Other assets	3	—
Reversal of Restructuring Reserves	(8)	(4)
Other	6	10
Total Pretax Charge	\$213	\$261

The work force reduction charges in 2001 and 2000 included involuntary separation costs for approximately 1,500 employees worldwide (805 in 2001 and 695 in 2000), including positions in administration, R&D, and manufacturing. The affected employees are entitled to receive severance benefits pursuant to established company severance policies or to government labor regulations. As of Dec. 31, 2000, 460 of the planned employee separations were completed; 358 of these employees received cash severance payments totaling \$28 million during 2000, and 102 employees elected deferred payments of \$9 million, which were paid during the first quarter of 2001. Planned separations were completed for 526 employees during 2001, including 27 employees who elected deferred payments of \$3 million, which were paid during the first quarter of 2002. Planned employee separations were completed for 400 employees during 2002; 399 of them received cash severance payments totaling \$25 million during 2002, and one employee elected deferred payments of less than \$1 million, which will be paid during the first quarter of 2003. Restructuring reversals of \$2 million were required in 2002 because about 35 positions originally in the plan were eliminated through attrition.

Facility closures and other exit costs in 2000 included contract termination costs (\$5 million), equipment dismantling and disposal costs (\$2 million), and other shutdown costs (\$2 million). Facility closures and other exit costs in 2001 included contract termination costs (\$28 million), property, plant and equipment dismantling and disposal costs (\$18 million), and other shutdown costs (\$3 million). The inventory write-offs in 2000 related to laureate oil, seed, and other inventories. The inventory write-offs in 2001 were for discontinued seed hybrids (\$31 million), unused raw materials at closed agricultural chemical manufacturing facilities (\$6 million), and other inventories, including certain discontinued agricultural chemical products (\$8 million). Inventory write-offs for both years, as well as \$37 million in property, plant and equipment impairments in 2001, were recorded in cost of goods sold. The remaining

\$20 million in property, plant and equipment impairments in 2001, recorded in restructuring charges, was related to the consolidation of agricultural chemical distribution sites and various corporate assets. The intangible asset impairment in 2000 included a \$79 million goodwill impairment associated with the decision to terminate certain nutrition programs. These asset dispositions and other exit activities are expected to be completed by mid-2003. The remaining restructuring actions will be funded from operations; these actions are not expected to affect the company's liquidity significantly. In 2002, \$6 million of restructuring reversals were recorded primarily because facility closing costs were lower than originally estimated and proceeds from disposed assets were higher than originally estimated.

Also included in the 2000 plan charges were special items. In 2001, a total charge of \$6 million was recorded in other expense to reflect the impairment of equity investments caused by adverse business developments of the investees. In 2000, other special items of \$10 million consisted of \$3 million for costs associated with a failed joint venture, and \$7 million for the recognition of an impairment of a marketable equity security that was classified as available for sale.

Activities related to restructuring and other special items recorded in 2000, 2001 and 2002 were as follows:

Dollars in millions	Work Force Reductions	Facility Closures	Asset Impair- ments	Other	Total
Jan. 1, 2000, Reserve Balance	\$ —	\$ —	\$ —	\$ —	\$ —
Additions	61	9	185	10	265
Costs Charged Against Reserves	(28)	(3)	—	—	(31)
Reclassification of Reserves					
to Other Balance Sheet Accounts:					
Trade receivables	—	—	(12)	—	(12)
Inventories	—	—	(60)	—	(60)
Property, plant and equipment	—	—	(22)	—	(22)
Goodwill	—	—	(88)	—	(88)
Other intangible assets	—	—	(3)	—	(3)
Other assets	—	—	—	(1)	(1)
Miscellaneous accruals	(3)	—	—	—	(3)
Accumulated other comprehensive loss	—	—	—	(7)	(7)
Dec. 31, 2000, Reserve Balance	\$ 30	\$ 6	\$ —	\$ 2	\$ 38
Additions	50	49	116	6	221
Costs Charged Against Reserves	(37)	(21)	—	(2)	(60)
Reversals	(8)	—	—	—	(8)
Reclassification of Reserves					
to Other Balance Sheet Accounts:					
Inventories	—	—	(45)	—	(45)
Other current assets	—	—	(6)	—	(6)
Property, plant and equipment	—	—	(57)	—	(57)
Goodwill	—	—	(2)	—	(2)
Other intangible assets	—	—	(3)	—	(3)
Other assets	—	—	(3)	(6)	(9)
Dec. 31, 2001, Reserve Balance	\$ 35	\$ 34	\$ —	\$ —	\$ 69
Costs Charged Against Reserves	(25)	(20)	—	—	(45)
Reversals	(2)	(5)	(1)	—	(8)
Reclassification of Reversal to					
Property, Plant and Equipment	—	—	1	—	1
Dec. 31, 2002, Reserve Balance	\$ 8	\$ 9	\$ —	\$ —	\$ 17

During 2000, costs charged against prior established reserves were \$21 million, primarily for work force reductions. These charges were partially offset by the reversal of \$4 million of the 1998 restructuring liability, primarily because severance costs were lower than originally estimated.

NOTE 5

Trade Receivables

The following table displays a roll-forward of the allowance for doubtful trade receivables for the three years ended Dec. 31, 2002:

Dollars in millions	
Balance Jan. 1, 2000	\$ 151
Additions — charged to expense	58
Deductions	(38)
Balance Dec. 31, 2000	\$ 171
Additions — charged to expense	42
Deductions	(36)
Balance Dec. 31, 2001	\$ 177
Additions — charged to expense	208
Deductions	(138)
Balance Dec. 31, 2002	\$ 247

In the second quarter of 2002, the company increased the allowance for doubtful trade receivables by \$154 million pretax for estimated uncollectible trade receivables in Argentina, of which approximately \$100 million has been written off against receivables as of Dec. 31, 2002. See Note 20 — Commitments and Contingencies — for further discussion on Argentina.

NOTE 6

Customer Financing Program

In the second quarter of 2002, Monsanto established a new \$500 million revolving financing program for selected customers through a third-party specialty lender. Under the financing program, Monsanto originates customer loans on behalf of the lender, which is a special purpose entity (SPE) that Monsanto consolidates, pursuant to Monsanto's credit and other underwriting guidelines approved by the lender. Monsanto services the loans and provides a first loss guarantee of up to \$100 million. Following origination, the lender transfers the loans to multi-seller commercial paper conduits through a non-consolidated qualifying special purpose entity (QSPE) in a transaction accounted for as a sale in accordance with SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishment of Liabilities*.

Monsanto has no ownership interest in the lender, the QSPE, or the loans. However, because Monsanto substantively originates

through the SPE (which it consolidates) and partially guarantees and services the loans, Monsanto accounts for the program as the originator of the loans and the transferor selling the loans to the QSPE.

Monsanto records its guarantee liability at a value that approximates fair value (except that it does not discount credit losses, because of the short term of the loans), primarily related to expected future credit losses. Monsanto does not recognize any servicing asset or liability, because the servicing fee represents adequate compensation for the servicing activities. Discounts on the sale of the customer loans, and servicing revenues collected and earned were not significant during 2002.

Through 2002, customer loans sold through the financing program totaled \$224 million, with \$111 million outstanding as of Dec. 31, 2002. The first loss guarantee will be in place throughout the financing program. Loans are considered delinquent when payments are 31 days past due. If a customer fails to pay an obligation when due, Monsanto would incur a liability to perform under the first loss guarantee. As of Dec. 31, 2002, less than \$1 million of loans sold through this financing program were delinquent. As of Dec. 31, 2002, Monsanto's recorded guarantee liability was less than \$1 million, based on the company's historical collection experience with these customers and the company's current assessment of credit exposure. Adverse changes in the actual loss rate would increase the liability. In the event that Monsanto is called upon to make payments under the first loss guarantee, it would have the benefit under the financing program of any amounts subsequently collected from the customer.

In January 2003, FASB Interpretation (FIN) No. 46, *Consolidation of Variable Interest Entities*, was issued. Because QSPEs are excluded from the scope of FIN 46, this interpretation is not expected to have an effect on Monsanto's accounting for the customer-financing program.

NOTE 7

Inventories

Components of inventories were:

Dollars in millions	2002	2001
Finished Goods	\$ 637	\$ 700
Goods In Process	398	357
Raw Materials and Supplies	250	329
Inventories at FIFO Cost	1,285	1,386
Excess of FIFO over LIFO Cost	(13)	(29)
Total	\$1,272	\$1,357

Commodity futures and options contracts are used to hedge the price volatility of certain commodities, primarily soybeans and corn. This hedging activity is intended to manage the price paid to production growers for corn and soybean seeds. The excess of FIFO over LIFO cost decreased by \$16 million, favorably affecting 2002 income, primarily because of lower costs. This favorable income effect was slightly offset by less than \$1 million as a result of the liquidation of certain LIFO inventories that were carried at higher costs prevailing in prior years.

NOTE 8

Goodwill and Other Intangible Assets

As described in Note 3 — New Accounting Standards — Monsanto adopted SFAS 141 and SFAS 142, effective Jan. 1, 2002. The first step of the transitional test, which compared the fair value of Monsanto's reporting units with their net book values (including goodwill), identified potential impairments in two reporting units. The second step of the transitional impairment test, which was completed in the second quarter of 2002, determined the \$2 billion pretax (\$1.8 billion aftertax) impairment. The resulting impairment charge was specific to the corn and wheat reporting units, relating to goodwill that resulted primarily from Monsanto's 1998 and, to a lesser extent, 1997 seed company acquisitions. A change in valuation method (from an undiscounted cash flow methodology under APB Opinion No. 17, *Intangible Assets*, to a discounted cash flow methodology required by SFAS 142) and unanticipated delays in biotechnology acceptance and regulatory approvals were the primary factors leading to the impairment. As required by SFAS 142, the transitional impairment charge was recorded as an accounting change in accordance with APB Opinion 20, effective Jan. 1, 2002. The impairment charge had no effect on Monsanto's liquidity or cash flow.

The company completed the required annual goodwill impairment test in the third quarter of 2002. There were no indications of a goodwill impairment for any of the reporting units.

Changes in the net carrying amount of goodwill for the year ended Dec. 31, 2002, by segment, are as follows:

Dollars in millions	Agricultural Productivity	Seeds and Genomics	Total
Balance as of Jan. 1, 2002	\$74	\$ 2,669	\$ 2,743
Transitional Impairment Charge	—	(1,984)	(1,984)
Effect of Foreign Currency Translation Adjustments	(1)	(3)	(4)
Additions	1	1	2
Balance as of Dec. 31, 2002	\$74	\$ 683	\$ 757

Information regarding the company's other intangible assets is as follows:

Dollars in millions	As of Dec. 31, 2002			As of Jan. 1, 2002		
	Carrying Amount	Accumulated Amortization	Net	Carrying Amount	Accumulated Amortization	Net
Germplasm	\$ 607	\$(322)	\$285	\$ 602	\$(251)	\$351
Acquired Biotechnology Intellectual Property	382	(142)	240	320	(101)	219
Trademarks	108	(22)	86	115	(19)	96
Other	50	(18)	32	53	(34)	19
Total	\$1,147	\$(504)	\$643	\$1,090	\$(405)	\$685

The increase in acquired biotechnology intellectual property during 2002 relates primarily to the previously announced collaboration with Ceres, Inc. (Ceres). This product discovery and development collaboration focuses on applying genomics technologies to provide improvements in, as well as to accelerate the time to commercialization of, certain agricultural crops. Under the collaboration, Monsanto acquired rights to certain of Ceres' existing technologies in exchange for vendor financing totaling \$40 million to be paid over the next five years. This existing technology has a weighted-average useful life of 10 years. Ceres will also receive additional payments if it meets specified objectives for developing additional related technology, as part of its continuing commitment to genomics-based product discovery. Monsanto also will fund a jointly implemented research program and has made a minority equity investment in Ceres. Including the \$40 million for vendor financing, total payments to Ceres under the collaboration (subject to performance by Ceres) are expected to approximate \$137 million over the next five years, plus potential royalties. Monsanto made payments of approximately \$40 million to Ceres in 2002.

Other intangible assets include a \$24 million nonamortizing intangible asset associated with minimum pension liabilities, most of which was recognized in the third quarter of 2002. Further information on the third-quarter minimum pension liability adjustment is discussed in Note 13 — Postretirement Benefits — Pensions. During 2002, other intangible assets with a carrying amount of \$20 million and accumulated amortization of \$(20) million were written off.

Upon adoption of SFAS 141 and SFAS 142, the classification of all identifiable and recognized intangible assets was reassessed, and any necessary reclassifications were made effective Jan. 1, 2002. Total amortization expense of other intangible assets was \$131 million in 2002 and \$122 million in 2001. Intangible asset amortization expense in 2001 included \$3 million related to intangible asset impairments, as discussed in Note 4 — Restructuring and Other Special Items.

Upon adoption of SFAS 142, the useful lives and residual values of all identifiable and recognized other intangible assets were reassessed, and any necessary prospective amortization period adjustments were made Jan. 1, 2002. SFAS 142 requires that recognized intangible assets with definite useful lives be amortized over their estimated lives and reviewed for impairment in accordance with SFAS 144.

Estimated intangible asset amortization expense for each of the five succeeding fiscal years is as follows:

Year ending Dec. 31,	Amount
2003	\$145
2004	105
2005	95
2006	55
2007	50

SFAS 142 did not require prior periods to be restated. The following table sets forth what the earnings and earnings per share would have been on an aftertax pro forma basis had the provisions of SFAS 142 been applied in 2001 and 2000.

Dollars in millions	Year Ended Dec. 31,		
	2002	2001	2000
Reported Net Income (Loss)	\$(1,693)	\$ 295	\$ 149
Goodwill amortization, net of tax	—	105	108
Effects of useful life adjustments, net of tax	—	1	1
Adjusted Net Income (Loss)	(1,693)	401	258
Cumulative effect of a change in accounting principle, net of tax	1,822	—	26
Adjusted Income Before Cumulative Effect of Accounting Change	\$ 129	\$ 401	\$ 284
<i>Basic Earnings (Loss) Per Share</i> (per Pro Forma Share in 2000):			
Reported Net Income (Loss)	\$ (6.50)	\$1.14	\$0.58
Goodwill amortization, net of tax	—	0.41	0.42
Effects of useful life adjustments, net of tax	—	—	—
Adjusted Net Income (Loss)	(6.50)	1.55	1.00
Cumulative effect of a change in accounting principle, net of tax	6.99	—	0.10
Adjusted Income Before Cumulative Effect of Accounting Change	\$ 0.49	\$1.55	\$1.10
<i>Diluted Earnings (Loss) Per Share</i> (per Pro Forma Share in 2000):			
Reported Net Income (Loss)	\$ (6.45)	\$1.12	\$0.58
Goodwill amortization, net of tax	—	0.40	0.42
Effects of useful life adjustments, net of tax	—	—	—
Adjusted Net Income (Loss)	(6.45)	1.52	1.00
Cumulative effect of a change in accounting principle, net of tax	6.94	—	0.10
Adjusted Income Before Cumulative Effect of Accounting Change	\$ 0.49	\$1.52	\$1.10

Had the new accounting standard been adopted effective Jan. 1, 2000, Monsanto would not have recorded pretax goodwill amortization of \$119 million in 2001 and \$124 million in 2000. Pretax R&D expenses would have been \$8 million higher in 2001 and in 2000 because of the reassessment of useful lives and classifications. As a result of these changes, the income tax provision would have been \$5 million higher in 2001 and \$7 million higher in 2000.

NOTE 9

Investments

Short-term investments on Dec. 31, 2002, included \$250 million of debt securities with original maturities of three to six months, designated as available for sale and stated at market value. The unrealized gains/losses on these investments were less than \$1 million during 2002.

Long-Term Investments:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Fair Value
Dec. 31, 2002, Equity Securities				
Available for Sale	\$34	\$10	\$(4)	\$40
Dec. 31, 2001, Equity Securities				
Available for Sale	37	27	(3)	61

Net unrealized gains on long-term investments (net of deferred taxes) included in shareowners' equity amounted to \$4 million as of Dec. 31, 2002, and \$15 million as of Dec. 31, 2001. Proceeds from sales of equity securities were \$10 million in 2002 and in 2001. Realized gains of \$7 million, net of \$5 million tax expense in 2002, and \$5 million, net of \$3 million tax expense in 2001, were determined using the specific identification method, and were included in net income. Realized losses of \$1 million, net of \$1 million of tax benefit in 2001, and \$4 million, net of \$3 million tax benefit in 2000, were included in net income, respectively, and were determined using the specific identification method.

NOTE 10

Income Taxes

The components of income (loss) before income taxes and cumulative effect of accounting change were:

Dollars in millions	2002	2001	2000
United States	\$ 453	\$ 631	\$333
Outside United States	(251)	(172)	1
Total	\$ 202	\$ 459	\$334

The components of income tax provision (benefit) were:

Dollars in millions	2002	2001	2000
Current:			
U.S. federal	\$ 84	\$187	\$ (9)
U.S. state	2	17	2
Outside United States	49	(8)	26
Total Current	135	196	19
Deferred:			
U.S. federal	54	24	158
U.S. state	13	(2)	10
Outside United States	(129)	(54)	(28)
Total Deferred	(62)	(32)	140
Total	\$ 73	\$164	\$159

Factors causing Monsanto's effective tax rate to differ from the U.S. federal statutory rate were:

	2002	2001	2000
U.S. Federal Statutory Rate	35%	35%	35%
U.S. Export Earnings	(5)	(6)	(3)
U.S. R&D Tax Credit	(2)	(1)	(4)
Higher Ex-U.S. Rates	5	3	1
State Income Taxes	5	2	2
Valuation Allowances	1	(3)	(2)
Donation of Appreciated Assets	(2)	—	—
Nondeductible Goodwill	—	5	17
Other	(1)	1	2
Effective Tax Rate	36%	36%	48%

Deferred income tax balances are related to:

Dollars in millions	2002	2001
Net Operating Loss and Tax Credit Carryforwards	\$309	\$133
Employee Fringe Benefits	286	162
Intangible Assets	140	35
Allowance for Doubtful Accounts	71	66
Inventories	43	70
Other	159	148
Valuation Allowance	(76)	(63)
Total Deferred Tax Assets	\$932	\$551
Property, Plant and Equipment	\$333	\$270
Other	14	12
Total Deferred Tax Liabilities	\$347	\$282
Net Deferred Tax Assets	\$585	\$269

As of Dec. 31, 2002, Monsanto had available approximately \$880 million in net operating loss carryforwards, the majority of which relate to Brazilian operations and do not expire. The increase in net operating loss carryforwards in 2002 is primarily a result of losses in Brazil and Argentina. Monsanto has recorded a valuation allowance totaling \$76 million against the Brazilian tax loss carryforwards, an increase of \$13 million in 2002. Monsanto

has not recorded a valuation allowance on the Argentine tax loss carryforwards, most of which expire in 2007. The increase in the valuation allowance in 2002 is the result of the company's analysis of the reduced likelihood of realizing the future tax benefit of a certain amount of the Brazilian loss carryforwards. Realization of net deferred tax assets is dependent on generating taxable income in future periods. The amount of the net deferred tax asset considered realizable and the allowance could be adjusted in the future if the estimates of taxable income change.

Income taxes and remittance taxes have not been recorded on approximately \$155 million of undistributed earnings of foreign operations of Monsanto, either because any taxes on dividends would be substantially offset by foreign tax credits, or because it intends to reinvest those earnings indefinitely. It is not practicable to estimate the income tax liability that might be incurred if such earnings were remitted to the United States.

Monsanto's current and deferred tax amounts are presented as if Monsanto had been a separate company for all years presented. Monsanto did not make any cash payments for taxes for the period through Aug. 31, 2000, because its operating results were included in Pharmacia's consolidated federal and state income tax returns until that date. To the extent that Monsanto's results were included in any Pharmacia income tax return for the periods from Sept. 1, 2000, through Aug. 13, 2002, Monsanto, in general, is obligated to pay Pharmacia the amount of taxes that would have been due had Monsanto filed its own tax returns. Effective Aug. 13, 2002, Monsanto and Pharmacia entered into a new tax-sharing agreement, replacing the original agreement that began on Sept. 1, 2000. After Aug. 13, 2002, Monsanto will no longer be included in the Pharmacia consolidated group and will file its own income tax returns in all U.S. and ex-U.S. jurisdictions. As of Dec. 31, 2002, Monsanto owed \$41 million to Pharmacia included in income taxes payable. As of Dec. 31, 2001, Monsanto had \$9 million due from Pharmacia related to income taxes payable.

With the completion of the 2000 income tax returns, an adjustment was made in 2001 to correct the deferred tax balances that were estimated on Sept. 1, 2000, when the assets and liabilities of the agricultural business were transferred from Pharmacia to Monsanto. The offset to this net increase in deferred tax assets was reflected as an adjustment to additional contributed capital in the Statement of Consolidated Shareowners' Equity.

NOTE 11

Debt and Other Credit Arrangements

Monsanto had committed borrowing facilities of \$1.3 billion unused as of Dec. 31, 2002. Expiration periods are as follows: \$800 million in July 2003, and \$500 million in August 2005. These facilities exist largely to support commercial paper borrowings. Covenants under these credit facilities restrict maximum borrowings. There are no related compensating balances, but the facilities are subject to various fees, which are based on the company's credit rating. Monsanto anticipates renewing the \$800 million facility in 2003, though it could be at a lower amount as the company expects to have reduced reliance on commercial paper compared with 2002.

The company had aggregate short-term loan facilities of \$190 million with unrelated parties, under which loans totaling \$24 million were outstanding as of Dec. 31, 2002.

Short-Term Debt

Dollars in millions	2002	2001
Commercial Paper	\$ —	\$320
Current Maturities of Long-Term Debt	358	95
Notes Payable to Banks	24	39
Bank Overdrafts	11	109
Subtotal	\$393	\$563
Related-Party Short-Term Loans Payable — Pharmacia (see Note 25 — Related-Party Transactions)	—	254
Total Short-Term Debt	\$393	\$817

	2002	2001
Weighted-Average Interest Rate on Short-Term Borrowings (excluding related-party borrowings) at End of Period	11.0%	3.2%

There was a significant increase in the weighted-average interest rate on short-term borrowings as of Dec. 31, 2002. At the end of 2002, the company did not have any outstanding commercial paper, but it had several short-term borrowings to support ex-U.S. operations, which had a weighted-average interest rate of 11 percent.

Long-Term Debt

Dollars in millions	2002	2001
Senior Notes at 7.375% due 2012	\$795	\$ —
Commercial Paper ⁽¹⁾	—	500
Medium-Term Notes at 12.9%, Due 2003 ⁽²⁾	—	336
Variable Rate Medium-Term Notes, Due 2006 ⁽³⁾	56	57
Total Long-Term Debt	\$851	\$893

(1) Commercial paper was classified as long-term debt because Monsanto had the ability and intent to renew these obligations beyond one year.

(2) In connection with this debt, the company entered into certain interest rate hedging contracts, which effectively exchange the fixed interest rate to variable interest at the six-month London Interbank Offered Rate (LIBOR), less a weighted-average spread of 1.169 percent.

(3) The interest rate for borrowings under these agreements is the Brazil Development Bank funding interest rate, as adjusted quarterly, plus a 4 percent spread, and the long-term interest rate, as set quarterly by the Central Bank of Brazil, plus a 3 percent spread.

In May 2002, Monsanto filed a \$2 billion shelf registration with the SEC. As of Dec. 31, 2002, \$1.2 billion remains available for future debt issuances. On Aug. 14, 2002, Monsanto issued \$600 million of 7-3/8% Senior Notes under this shelf registration. On Aug. 23, 2002, the aggregate principal amount of the outstanding notes was increased to \$800 million. These notes are due on Aug. 15, 2012. The net proceeds from the sale of these notes were used to reduce commercial paper borrowings and to repay short-term debt owed to Pharmacia.

During 2002, Monsanto issued approximately \$50 million of additional debt, primarily medium-term debt with floating interest.

Annual aggregate maturities of medium-term notes are \$358 million in 2003, \$27 million in 2004, \$18 million in 2005, and \$11 million in 2006. Current maturities of long-term debt include approximately \$275 million of debt that can be extended by one year at the option of the lender. Under the terms of the agreement with the lender, a decline in LIBOR in December 2001 caused \$35 million of the medium-term notes due in 2003 to be paid in 2002.

The information regarding interest expense below reflects Monsanto's interest expense, interest expense on debt, or interest amounts specifically attributable to Monsanto in 2002, 2001 and 2000:

Dollars in millions	2002	2001	2000
Interest Cost Incurred	\$89	\$129	\$251
Less: Capitalized on Construction	(8)	(30)	(37)
Interest Expense	\$81	\$ 99	\$214

NOTE 12

Financial Instruments

The notional amounts, carrying amounts, and estimated fair values of the company's financial instruments were as follows as of Dec. 31:

Dollars in millions	2002			2001		
	Notional Amount	Carrying Amount	Fair Value	Notional Amount	Carrying Amount	Fair Value
Financial Assets:						
Forward-currency exchange contracts:						
Currencies purchased	\$154	\$ (3)	\$ (3)	\$469	\$ (6)	\$ (6)
Currencies sold	489	(4)	(4)	110	(1)	(1)
Commodity futures:						
Futures purchased	23	(2)	(2)	146	(11)	(11)
Futures sold	—	—	—	—	—	—
Options purchased	8	—	—	—	—	—
Financial Liabilities:						
Short-term debt	—	393	393	—	817	817
Long-term debt	—	851	920	—	893	893

The forward-currency exchange contracts generally have maturities of less than 12 months, and they require Monsanto to exchange currencies at agreed-upon rates at maturity. The company does not expect any losses from credit exposure related to these instruments.

Monsanto's business and activities expose it to a variety of market risks, including risks related to changes in commodity prices, foreign-currency exchange rates, interest rates and, to a lesser degree, security prices. These financial exposures are monitored and managed by the company as an integral part of its market risk management program. This program focuses on the unpredictability of financial markets and seeks to reduce the potentially adverse effects that volatility in these markets could have on

operating results. Monsanto's overall objective in holding derivatives is to minimize the risks by using the most effective methods to eliminate or reduce the effects of these exposures.

Monsanto's commodity price risk management strategy is to use derivative instruments to minimize significant, unanticipated earnings fluctuations that may arise from volatility in commodity prices. Price fluctuations in commodities, mainly in corn and soybeans, can cause the actual prices paid to production growers for corn and soybean seeds to differ from anticipated cash outlays. Monsanto uses commodity futures and options contracts to manage these risks. The company also uses commodity futures and options contracts to manage the value of its corn and soybean inventories.

As part of its market risk management strategy, Monsanto uses derivative instruments to protect fair values and cash flows from fluctuations caused by volatility in currency exchange rates and commodity prices. This volatility affects cross-border transactions that involve sales and inventory purchases denominated in foreign currencies. Monsanto is exposed to this risk both on an intercompany basis and on a third-party basis. Additionally, the company is exposed to foreign-currency exchange risks for recognized assets and liabilities, royalties, and net investments in subsidiaries that are denominated in currencies other than its functional currency. The company uses forward-currency exchange contracts, swaps, and options to manage these risks.

It is Monsanto's interest rate risk management strategy to allow the use of derivative instruments to minimize significant, unanticipated earnings fluctuations that may arise from volatility in interest rates of the company's borrowings. The company's specific goals are to manage interest rate sensitivity of debt and, where possible, to lower the cost of its borrowed funds.

By using derivative financial instruments to manage exposures to changes in commodity prices, exchange rates, and interest rates, Monsanto exposes itself to the risk that the counterparty might fail to perform its obligations under the terms of the derivative contract. Monsanto minimizes this risk in derivative instruments by entering into transactions with high-quality counterparties and by limiting the amount of exposure to each instrument. Such financial instruments are neither held nor issued by the company for trading purposes.

Foreign-Currency Hedges

The company sometimes uses foreign-exchange options and forward-exchange contracts as hedges against anticipated sales and/or purchases denominated in foreign currencies. The company enters into these contracts to protect itself against the risk that the eventual dollar-net-cash flows will be adversely affected by changes in exchange rates. The company also uses foreign-currency exchange contracts to hedge the effects that fluctuations in exchange rates may have on foreign-currency-denominated third-party and intercompany receivables and payables.

The company hedges a portion of its net investment in Brazilian subsidiaries, and recorded an aftertax gain of \$19 million in 2002 and an aftertax loss of \$7 million in 2001, both to accumulated foreign currency translation.

Foreign currencies in which Monsanto has significant hedged exposures are the Canadian dollar, the Brazilian real, the euro, the Swiss franc, the South African rand, the Philippine peso, and the Polish zloty. The aggregate net transaction loss, net of related hedging gains and losses, included in net earnings for the years ended Dec. 31, 2002 and 2001, were \$36 million and \$32 million, respectively, primarily because of the Argentine-peso transaction exposure.

Fair-Value Hedges

Monsanto uses futures and options contracts to manage the value of the corn and soybean seed inventories that it buys from growers. Generally, the company hedges from 70 percent to 100 percent of the corn and soybean inventory value, depending on the crop and grower pricing.

Interest rate swap agreements are used to reduce interest rate risks and to manage interest exposure. Monsanto uses interest rate swaps to convert its fixed-rate debt to variable-rate debt. The resulting cost of funds may be lower or higher than it would have been if variable-rate debt had been issued directly. Under the interest rate swap contracts, the company agrees with other parties to exchange, at specified intervals, the difference between fixed-rate and floating-rate interest amounts, which is calculated based on an agreed-upon notional amount.

The difference between the carrying value and the fair value of hedged items classified as fair-value hedges was offset by the change in fair value of the related derivatives. Accordingly, hedge ineffectiveness for fair-value hedges, determined in accordance with SFAS 133, had no effect on earnings in 2002. No fair-value hedges were discontinued during 2002 or 2001.

Cash-Flow Hedges

The company enters into contracts with a number of its seed growers to purchase their output at the market prices in effect when the individual growers elect to fix their contract prices. As a hedge against possible commodity price fluctuations, Monsanto purchases futures and options contracts for corn and soybeans. The futures contracts hedge the commodity prices paid, while the options contracts limit the unfavorable effect that price changes could have on these purchases.

During 2002, Monsanto recognized a net loss of \$3 million in cost of goods sold, which represented the ineffectiveness of all cash-flow hedges. These amounts represent the portion of the derivatives' fair value that is excluded from the assessment of hedge effectiveness. No cash-flow hedges were discontinued during 2002 or 2001.

As of Dec. 31, 2002, \$7 million of aftertax deferred net gains on derivative instruments accumulated in other comprehensive loss are expected to be reclassified to earnings during the next 12 months. The actual sales of the inventory, which are expected to occur during the next 12 months, will necessitate the reclassification of the derivative gains into earnings. The maximum term over which the company is hedging exposures to the variability of cash flow (for all forecasted transactions, excluding interest payments on variable-rate debt) is 18 months. As of Dec. 31, 2001, \$8 million

of aftertax deferred net losses on derivative instruments were accumulated in other comprehensive loss and were reclassified into earnings in 2002.

As of Dec. 31, 2002, the company had futures contracts with notional amounts of \$19 million and \$4 million for corn and soybeans, respectively. As of Dec. 31, 2001, the company had futures contracts with notional amounts of \$114 million and \$32 million for soybeans and corn, respectively.

In June 2002, the company entered into a treasury rate lock agreement with several banks to hedge against changes in long-term interest rates on a portion of a planned debt issuance. The closing of this agreement in August 2002 resulted in a pretax loss of \$26 million, because of a decrease in interest rates. Monsanto designated this rate lock agreement as a cash-flow hedge. Since this rate lock is designated as a cash-flow hedge, the net loss on the rate lock, to the extent the swap is effective, is recognized in other comprehensive loss until the hedged interest costs are recognized in earnings. As of Dec 31, 2002, \$15 million of aftertax deferred net losses on the interest rate lock accumulated in other comprehensive loss are expected to be reclassified into earnings during the next 10 years, which is the term of the underlying debt.

Credit Risk Management

Monsanto invests its excess cash in deposits with major banks throughout the world and in high-quality, short-term debt instruments. Such investments are made only in instruments issued or enhanced by high-quality institutions. As of Dec. 31, 2002, the company had no financial instruments that represented a significant concentration of credit risk. Amounts invested in any single institution are limited to minimize risk. The company has not incurred any credit risk losses related to those investments.

The company sells a broad range of agricultural products to a diverse group of customers throughout the world. In the United States, the company makes substantial sales to relatively few large wholesale customers. The company's agricultural products business is highly seasonal, and it is subject to weather conditions that affect commodity prices and seed yields. Credit limits, ongoing credit evaluation, and account monitoring procedures are used to minimize the risk of loss. Collateral is secured when it is deemed appropriate by the company. For example, during 2002 and 2001, in order to reduce credit exposure in Latin America, the company collected payments on certain customer accounts in grain.

Monsanto regularly evaluates its business practices to minimize its credit risk. As a result, the company improved its prepayment program and one of its marketing programs. In 2001, the prepayment program was modified in the United States, allowing the company to net customer prepayments as a legal offset against the customer's current outstanding balance during 2002 and 2001. In 2001, the company also modified one of its U.S. marketing programs, so that any amounts payable to a customer are first applied to the customer's receivable account for both 2002 and 2001.

Postretirement Benefits – Pensions

During 2000 and 2001, Monsanto employees were covered by noncontributory pension plans sponsored either by Monsanto or by Pharmacia. Pursuant to a separation agreement between Monsanto and Pharmacia dated Sept. 1, 2000, as amended, the plans were separated. Depending on which entity was the plan sponsor, the plan assets and liabilities were recognized on the balance sheet of either Monsanto or Pharmacia. At the time of the separation, the plans were split as follows (1) certain Pharmacia-sponsored pension plans transferred plan assets and plan benefit obligations for Monsanto employees to Monsanto-sponsored plans, (2) Monsanto assumed sponsorship of certain plans in which a limited number of Pharmacia employees participate, and (3) certain Pharmacia-sponsored plans in which Monsanto employees participate continued.

Effective Jan. 1, 2002, Monsanto and Pharmacia separated their noncontributory pension plans into Monsanto-only and Pharmacia-only sponsored plans. The sponsorship of a tax-qualified U.S. pension plan in which both Monsanto and Pharmacia employees participated was transferred from Pharmacia to Monsanto, effective January 2002. The assets attributable to Pharmacia employees and former Pharmacia employees were transferred to a new Pharmacia-sponsored plan. The approximate fair value of assets, projected benefit obligation, accumulated benefit obligation, net pension liabilities, and related deferred tax assets assumed by Monsanto as of Jan. 1, 2002, were \$1 billion, \$1.3 billion, \$1.2 billion, \$120 million, and \$45 million, respectively. The net offset of the assumed net pension liabilities and related deferred tax assets was reflected as a reduction of additional contributed capital in the Statement of Consolidated Shareowners' Equity, as of Jan. 1, 2002.

Because of the decline in the equity markets, the fair value of Monsanto's pension fund assets has decreased. In accordance with SFAS No. 87, *Employers' Accounting for Pensions*, the company recorded an additional minimum pension liability adjustment during the third and fourth quarters of 2002. The effect of this noncash adjustment increased postretirement liabilities by approximately \$330 million, increased deferred income tax assets by approximately \$110 million, increased intangible assets for prior service costs by approximately \$20 million, and decreased shareowners' equity by approximately \$200 million aftertax. The noncash charge to shareowners' equity did not affect Monsanto's results of operations, but is reflected in other comprehensive loss.

Total pension cost related to Monsanto employees in 2002, 2001 and 2000, included in the Statement of Consolidated Operations from both Monsanto- and Pharmacia-sponsored plans, was \$22 million, \$8 million and \$24 million, respectively. In 2001, the expense related to Monsanto-sponsored plans for Monsanto employees only comprised service costs for benefits of \$4 million, interest cost on benefit obligation of \$11 million, assumed return on plan assets of \$(9) million, and amortization of unrecognized losses of \$1 million. For the period subsequent to Sept. 1, 2000,

through Dec. 31, 2000, the expense related to Monsanto-sponsored plans for Monsanto employees only comprised service costs for benefits of \$2 million, interest cost on benefit obligation of \$3 million, assumed return on plan assets of \$1 million, and amortization of unrecognized net loss of \$1 million.

The information that follows relates to all of the Monsanto- and Pharmacia-sponsored pension plans in which Monsanto employees participated, including pension expense related to Pharmacia employees in 2001 and 2000. The components of pension cost for these plans were:

Dollars in millions	2002	2001	2000
Plan Sponsor	Monsanto	Monsanto & Pharmacia	Monsanto & Pharmacia
Plan Participant	Monsanto Only	Monsanto & Pharmacia	Monsanto & Pharmacia
Service Cost for Benefits Earned			
During the Year	\$ 32	\$ 47	\$ 60
Interest Cost on Benefit Obligation	103	130	163
Assumed Return on Plan Assets	(119)	(151)	(168)
Amortization of Unrecognized Net Loss/(Gain)	3	(8)	(5)
FAS 88 Charge: Special Termination Benefit Charge	3	—	—
Total	\$ 22	\$ 18	\$ 50

Pension benefits are based on an employee's years of service and/or compensation level. Pension plans were funded in accordance with Monsanto's and Pharmacia's long-range projections of the plans' financial conditions. These projections took into account benefits earned and expected to be earned, anticipated returns on pension plan assets, and income tax and other regulations.

Pension costs were determined using the preceding year-end rate assumptions. The following assumptions, calculated on a weighted-average basis, were effective as of Dec. 31 for the principal plans in which Monsanto employees participated:

	2002	2001	2000
Discount Rate	6.75%	7.25%	7.50%
Assumed Long-Term Rate of Return on Assets	8.75%	9.50%	9.50%
Annual Rates of Salary Increase (for plans that base benefits on final compensation level)	3.75%	4.25%	4.50%

Lower market interest rates and plan asset returns have resulted in declines in pension plan asset performance. As a result, the company reduced its assumptions in the table above as of Dec. 31, 2002, reflecting current economic conditions. As a result of these changes, pension expense, which will be determined using Dec. 31, 2002, assumptions, is expected to increase by approximately \$9 million in 2003.

The funded status of the pension plans in which Monsanto employees participated as of Dec. 31, 2002 and 2001, was:

Dollars in millions	2002		2001		
	Monsanto	Pharmacia	Monsanto	Monsanto	Pharmacia
Plan Sponsor					
Plan Participants	Monsanto Only	Monsanto & Pharmacia	Monsanto Only	Monsanto & Pharmacia	Monsanto & Pharmacia
Change in Benefit Obligation:					
Benefit obligation at beginning of year	\$ 220	\$ 1,638	\$ 152	\$ 75	\$ 1,725
Service cost	32	—	5	—	43
Interest cost	103	—	11	—	119
Plan participants' contributions	1	—	1	—	—
Plan amendments	(1)	—	—	—	—
Actuarial loss/(gain)	147	—	7	—	(61)
Acquisitions/divestitures	—	—	(5)	—	—
Benefits paid	(144)	—	(20)	—	(188)
Benefit obligation transferred to Monsanto plans	1,208	(1,208)	73	(73)	—
Benefit obligation transferred to Pharmacia-only plans	—	(430)	(4)	(2)	—
Benefit Obligation at End of Year	\$ 1,566	\$ —	\$ 220	\$ —	\$ 1,638
Change in Plan Assets:					
Fair value of plan assets at beginning of year	\$ 114	\$ 1,264	\$ 25	\$ 106	\$ 1,594
Actual return on plan assets	(110)	—	(1)	—	(142)
Employer contribution	35	—	10	—	—
Plan participants' contributions	1	—	1	—	—
Acquisitions/divestitures	—	—	(5)	—	—
Fair value of benefits paid	(144)	—	(20)	—	(188)
Fair value of plan assets transferred to Monsanto plans	998	(998)	104	(104)	—
Fair value of plan assets transferred to Pharmacia-only plans	—	(266)	—	(2)	—
Plan Assets at End of Year	\$ 894	\$ —	\$ 114	\$ —	\$ 1,264
Unfunded Status	\$ 672	\$ —	\$ 106	\$ —	\$ 374
Unrecognized Prior Service Cost	(27)	—	(8)	—	(37)
Unrecognized Subsequent Loss	(439)	—	(2)	—	(86)
Accrued Net Pension Liability	\$ 206	\$ —	\$ 96	\$ —	\$ 251

As of Dec. 31, 2002, the projected benefit obligation (PBO), the accumulated benefit obligation (ABO), and the fair value of plan assets for pension plans with ABOs in excess of plan assets for Monsanto-sponsored plans were \$1.4 billion, \$1.3 billion and \$797 million, respectively. As of Dec. 31, 2001, the PBO, the ABO, and the fair value of plan assets for pension plans with ABOs in excess of plan assets for Monsanto-sponsored plans were \$90 million, \$84 million and zero, respectively.

In 2002, amounts recognized in the Statement of Consolidated Financial Position were included in miscellaneous accruals, accrued pension liability, additional minimum liability, accumulated other

comprehensive loss, prepaid benefit cost, and intangible assets in the amounts of \$9 million, \$223 million, \$352 million, \$(328) million, \$(26) million, and \$(24) million, respectively, providing a net pension liability of \$206 million.

In 2001, amounts recognized in the Statement of Consolidated Financial Position were included in miscellaneous accruals, accrued pension liability, additional minimum liability, accumulated other comprehensive loss, prepaid benefit cost, and intangible assets in the amounts of \$5 million, \$109 million, \$20 million, \$(17) million, \$(18) million and, \$(3) million, respectively, providing a net pension liability of \$96 million.

NOTE 14

Postretirement Benefits – Health Care and Other

Pursuant to a separation agreement between Monsanto and Pharmacia on Sept. 1, 2000, Monsanto created and assumed sponsorship of all medical, life, disability, and other welfare benefit plans in which its employees participate. Prior to Sept. 1, 2000, most Monsanto employees participated in certain Pharmacia-sponsored benefit plans that provided health care and life insurance benefits for retired employees. There is no detailed information available about the components of the total cost and obligations that relate solely to Monsanto for periods prior to Sept. 1, 2000. Total postretirement benefit costs for Monsanto employees included in Monsanto's Statement of Consolidated Operations in 2002, 2001 and 2000 were \$28 million, \$25 million and \$18 million, respectively.

Substantially all regular full-time U.S. employees hired prior to May 1, 2002, and certain employees in other countries become eligible for these benefits if they reach retirement age while employed by Monsanto and have the requisite service. These postretirement benefits are unfunded and generally are based on the employees' years of service and/or compensation levels. The costs of postretirement benefits are accrued by the date the employees become eligible for the benefits.

The following information pertains to the Monsanto- and Pharmacia-sponsored postretirement benefit plans in which Monsanto employees participated, principally health care and life insurance. The cost components of these plans were:

Dollars in millions	2002	2001	2000
Plan Sponsor	Monsanto	Monsanto	Pharmacia
Plan Participant	Monsanto Only	Monsanto Only	Monsanto & Pharmacia
Service Cost for Benefits			
Earned During the Year	\$ 9	\$ 8	\$13
Interest Cost on Benefit Obligation	19	18	25
Amortization of Unrecognized			
Net Gain	—	(1)	(8)
Total	\$ 28	\$25	\$30

Monsanto determined postretirement costs using the preceding year-end rate assumptions. The following assumptions, calculated on a weighted-average basis, were used as of Dec. 31 for the principal plans:

	2002	2001	2000
Discount Rate	6.75%	7.25%	7.50%
Initial Trend Rate for Health Care Costs	10.00%	5.25%	5.00%
Ultimate Trend Rate for Health Care Costs	5.00%	5.25%	5.00%

A 1 percent increase/decrease in the assumed trend rate for health care costs would have had a \$1 million effect on Monsanto's 2002 cost for postretirement health care benefits. It would have increased/decreased the accumulated postretirement benefit obligation by \$6 million as of Dec. 31, 2002.

As of Dec. 31, 2002 and 2001, the status of the postretirement health care, life insurance, and employee disability benefit plans in which Monsanto employees participated was as follows:

Dollars in millions	2002	2001
Change in Benefit Obligation:		
Benefit obligation at beginning of year	\$261	\$250
Service cost	9	8
Interest cost	19	18
Plan amendments	(10)	—
Actuarial loss	29	7
Plan participant contributions	1	1
Benefits paid	(17)	(19)
Benefit obligation transferred to Pharmacia plans	—	(4)
Benefit Obligation at End of Year	\$292	\$261
Unfunded Status	\$292	\$261
Unrecognized Prior Service Cost	3	3
Unrecognized Subsequent Loss	(30)	(11)
Accrued Postretirement Liability	\$265	\$253

In 2002, amounts recognized in the Statement of Consolidated Financial Position were included in miscellaneous accruals and postretirement liabilities in the amounts of \$23 million and \$242 million, respectively. In 2001, amounts recognized in the Statement of Consolidated Financial Position were included in miscellaneous accruals and postretirement liabilities in the amounts of \$17 million and \$236 million, respectively.

NOTE 15

Employee Savings Plans

For some company employee savings and investment plans, employee contributions are matched in part by the company. Monsanto matches employee contributions to the U.S. tax-qualified savings and investment plan with shares that are released from the Monsanto ESOP component of the Monsanto Savings and Investment Plan (Monsanto SIP). As of Dec. 31, 2002, the Monsanto ESOP held 7.2 million shares of Monsanto common stock.

In connection with the separation of Monsanto's businesses from those of Pharmacia, and pursuant to the Employee Benefits and Compensation Allocation Agreement between Pharmacia and Monsanto dated as of Sept. 1, 2000, certain assets and liabilities of the Pharmacia Corporation Savings and Investment Plan (Pharmacia SIP — formerly known as the Monsanto SIP)

were transferred to the new Monsanto SIP as of July 1, 2001. Assets and liabilities of a trust (Pharmacia ESOP Trust) established under the Pharmacia SIP were restructured and divided between the Pharmacia ESOP Trust and a trust established under the Monsanto SIP (Monsanto ESOP Trust). In connection with this restructuring, the portion of guaranteed debt that had been attributed to Monsanto was retired, and Monsanto loaned \$42.8 million to the new Monsanto ESOP Trust. Certain costs associated with this debt restructuring were allocated to Monsanto, which resulted in a pretax expense of \$4 million (\$2 million aftertax) in 2001.

At its inception, the Pharmacia ESOP Trust acquired Pharmacia shares by using proceeds from the issuance of long-term notes and debentures guaranteed by Pharmacia and a loan from Pharmacia. Shares released from the Monsanto ESOP are allocated each year to employee savings accounts as matching contributions. Prior to the spinoff on Aug. 13, 2002, the Monsanto ESOP held Pharmacia shares. After the spinoff, the Pharmacia shares held were gradually converted to shares of Monsanto stock through open market transactions and through the exchange of Pharmacia stock for Monsanto stock with certain Pharmacia employee benefit plans at market rates. In 2002, 975,246 Monsanto equivalent shares were released from the Monsanto ESOP and allocated specifically to Monsanto participants. An additional 472,722 Monsanto equivalent shares were released from the Monsanto ESOP in 2002 awaiting allocation to all participants, leaving 5.3 million shares of Monsanto common stock remaining in the Monsanto ESOP and unallocated as of Dec. 31, 2002.

Compensation expense is equal to the cost of the shares allocated to participants, less cash dividends paid on the shares held by the Monsanto ESOP. Dividends on the common stock owned by the Monsanto ESOP are used to repay the Monsanto ESOP borrowings, which were \$30 million as of Dec. 31, 2002. Compensation expense for Monsanto employees included in the Statement of Consolidated Operations in 2002, 2001 and 2000 was \$3 million, \$3 million and \$6 million, respectively. The following information relates to the Monsanto ESOP in 2002 and 2001 (including the portion of the Pharmacia ESOP attributable to Monsanto employees for the period Jan. 1 to June 30, 2001), and the Pharmacia ESOP plan in 2000, in which the Monsanto and Pharmacia employees participated, for the years ended Dec. 31:

Dollars in millions	2002	2001	2000
Plan Sponsor	Monsanto	Monsanto	Pharmacia
Plan Participant	Monsanto Only	Monsanto Only	Monsanto & Pharmacia
Total ESOP Expense	\$5	\$6	\$18
Interest Portion of Total ESOP Expense	2	3	8
Net Cash Contribution	5	6	21
Dividends Paid on ESOP Shares Held	4	2	4

NOTE 16

Stock-Based Compensation Plans

Monsanto grants its employees stock options under two fixed stock option plans it established in 2000. Under the Monsanto Company Long-Term Incentive Plan (2000 Plan), formerly known as the Monsanto 2000 Management Incentive Plan, the company may grant awards to key officers, directors, and employees of Monsanto, including stock options, of up to 22.6 million shares of Monsanto common stock. Other employees were granted options under the Monsanto Company Broad-Based Stock Option Plan (Broad-Based Plan), which permits the granting of a maximum of 2.7 million shares of Monsanto common stock to employees other than officers and other employees subject to special reporting requirements. Under the plans, the exercise price of any option must be no less than the fair market value of the company's common stock on the grant date. The plans provide that the term of any option granted may not exceed 10 years and that each option may be exercised for such period as may be specified by the people and compensation committee of the board of directors or its delegate, which administers the plans.

The Monsanto Non-Employee Director Equity Incentive Compensation Plan (Director Plan) was established in 2000 for directors who are not employees of Monsanto or its affiliates. Half of the annual retainer for each nonemployee director is automatically paid in the form of deferred stock — shares of common stock to be delivered at a specified time in the future. The remaining half of the director's annual retainer may be taken in the form of nonqualified stock options, restricted common stock, deferred common stock, or cash. The exercise price of any stock option is the fair market value of the company's common stock on the grant date. The term of any options granted under the Director Plan is 10 years, and the options vest in installments over the life of the director's term. The Director Plan is administered by a committee of company executives. Compensation benefit recognized for the stock-based component of the Director Plan was \$44,000 in 2002. Compensation expense recognized for the stock-based component of the Director Plan was \$774,000 in 2001 and \$359,000 in 2000.

The 2000 Plan also authorizes Monsanto to grant awards of restricted or unrestricted shares. In 2002, 147,000 restricted shares were granted, whereby 15 percent vest in 2003 and the remaining 85 percent vest in 2005. In 2001, 45,500 restricted shares were granted; they vest in increments of 5 percent in 2002, 51 percent in 2003, 36 percent in 2004, 4 percent in 2005, and 4 percent in 2006. In 2000, 10,000 restricted shares were granted: 33 percent vested in 2001 and 67 percent in 2002. Compensation expense is based on the market price of Monsanto's common stock at the grant date and is recognized over the vesting period. Compensation expense recognized for these restricted shares was \$920,000 in 2002, \$455,000 in 2001, and \$20,000 in 2000.

In 2000, four executives signed Phantom Share Agreements. These agreements provided each executive with a number of phantom shares of common stock equal to the cash severance and value of benefits continuation they would have received under a prior change-of-control agreement with Pharmacia, divided by the IPO offering price. The phantom shares, which gave the holders the opportunity to earn a cash award equal to the fair value of the company's common stock upon the attainment of a certain performance goal, vested Oct. 1, 2002. In 2002, 825,796 phantom shares were settled for cash payments of \$13 million. Monsanto recognized \$4 million in compensation benefit in 2002, and \$14 million and \$3 million in compensation expense in 2001 and 2000, respectively, related to the phantom shares. Compensation expense was based on the market price of Monsanto's common stock and recognized over the 24-month vesting period.

In connection with the IPO on Oct. 23, 2000, Monsanto issued a one-time founder's grant of stock options to all employees under the 2000 Plan and the Broad-Based Plan. Approximately 22 million options were granted on that date, each with an exercise price of \$20 per share, and vest in increments of 50 percent in March 2002 and 50 percent in March 2003. Additional grants were made to new hires eligible for option grants under the 2000 Plan on a monthly basis, and to new hires eligible for option grants under the Broad-Based Plan on a quarterly basis, with an exercise price equal to the market price on the grant date. These options vest in increments of 50 percent on the one-year anniversary of the grant date

and 50 percent in 2003; except for options granted in 2002, which vest 100 percent in 2003, but in no event less than one year from the grant date. The maximum term is 10 years.

Prior to the IPO, Monsanto employees participated in Pharmacia incentive plans. Any related outstanding options held by Monsanto employees will be exercised, canceled or forfeited under the provisions of the Pharmacia plans. A summary of the status of the Monsanto plans for the years ended Dec. 31, 2002 and 2001, and the period Oct. 23, 2000, through Dec. 31, 2000, follows:

	Shares	Outstanding Weighted-Average Exercise Price
Oct. 23, 2000	—	\$ —
Granted	22,607,420	20.07
Exercised	—	—
Forfeited	(40,600)	20.00
Balance Outstanding Dec. 31, 2000	22,566,820	20.07
Granted	1,588,986	33.37
Exercised	(23,908) ⁽¹⁾	20.00
Forfeited	(1,312,740)	20.15
Balance Outstanding Dec. 31, 2001	22,819,158	20.98
Granted	508,840	26.12
Exercised	(3,153,400)	20.04
Forfeited	(662,747)	21.88
Balance Outstanding Dec. 31, 2002	19,511,851	\$21.24

(1) In accordance with the provisions of the plans, shares exercised related to those of former employees who were separated.

Monsanto stock options outstanding at Dec. 31, 2002, are summarized as follows:

Range of Exercise Prices	Shares	Options Outstanding		Options Exercisable	
		Weighted- Average Remaining Contractual Life (Years)	Weighted- Average Exercise Price per Share	Shares	Weighted- Average Exercise Price per Share
\$14.66 – \$20.00	17,472,642	7.83	\$19.96	8,248,534	\$20.00
\$20.01 – \$30.00	487,671	8.11	\$25.47	271,512	\$26.16
\$30.01 – \$37.61	1,551,538	8.54	\$34.13	736,536	\$34.21

As permitted by SFAS 123, the company has elected to follow the guidance of APB Opinion 25, for measuring and recognizing its stock-based transactions with employees. Accordingly, no compensation expense was recognized in relation to any of the Monsanto or Pharmacia option plans in which Monsanto employees participate. Had compensation expense for these

plans been determined based on the fair value at the grant dates for awards under these plans, consistent with the method of SFAS 123, Monsanto's net income (loss) and net income (loss) per share would have been reduced to the pro forma amounts indicated as follows:

Dollars in millions, except per share amounts	2002	2001	2000
Net income (loss):			
As reported	\$ (1,693)	\$ 295	\$ 149
Add: Stock-based employee compensation expense included in reported net income (loss), net of tax	1	—	—
Less: Total stock-based employee compensation expense determined under fair value based method for all awards, net of tax	(29)	(43)	(113)
Pro forma	\$ (1,721)	\$ 252	\$ 36
Basic income (loss) per share (per pro forma share in 2000):			
As reported	\$ (6.50)	\$ 1.14	\$ 0.58
Pro forma	(6.61)	0.97	0.14
Diluted income (loss) per share (per pro forma share in 2000):			
As reported	\$ (6.45)	\$ 1.12	\$ 0.58
Pro forma	(6.56)	0.95	0.14

Pro forma compensation expense for years presented may not be representative of compensation expense that will be incurred on a pro forma basis in future years.

In computing the pro forma compensation expense, Monsanto used the Black Scholes option-pricing model to estimate the fair value of each option on the date it was granted. The weighted-average fair value of options granted to Monsanto employees during 2002 and 2001 was \$9.53 and \$8.46, respectively, per Monsanto stock option. The weighted-average fair values of options granted to Monsanto employees during 2000 were \$7.24 for Monsanto stock options and \$15.73 for Pharmacia stock options. The following weighted-average assumptions were used for grants:

	2002	2001	2000	
	Monsanto Plans	Monsanto Plans	Monsanto Plans	Pharmacia Plans
Expected Dividend Yield	1.88%	1.46%	1.96%	1.00%
Expected Volatility	44.6%	45.3%	43.7%	26.0%
Risk-Free Interest Rates	3.8%	4.4%	5.7%	6.75%
Expected Option Life (in years)	3.5	3.5	3.5	5.0

Certain Monsanto employees received stock appreciation rights as part of Monsanto's and Pharmacia's stock compensation plans. These rights entitle those employees to receive a cash amount determined by the appreciation in the fair market value of the company's common stock between the date of the award and the date of exercise. Upon the closing of the merger of Pharmacia & Upjohn, Inc. with the former Monsanto Company on March 31, 2000, the rights from the Pharmacia plan vested. The company recognized net compensation benefit of \$415,000 in 2002 and \$4 million in 2001 associated with these rights. The company recognized compensation expense of \$13 million in 2000 associated with these rights.

NOTE 17

Capital Stock

The company is authorized to issue 1.5 billion shares of common stock, \$0.01 par value, and 20 million shares of undesignated preferred stock, \$0.01 par value. The board of directors has the authority, without action by the shareowners, to designate and issue preferred stock in one or more series and to designate the rights, preferences, and privileges of each series, which may be greater than the rights of the company's common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of common stock until the board of directors determines the specific rights of the holders of preferred stock.

The authorization of undesignated preferred stock makes it possible for Monsanto's board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of the company. These and other provisions may deter hostile takeovers or delay attempts to change management control.

There were no shares of preferred stock outstanding as of Dec. 31, 2002. As of that date, 261.4 million shares of common stock were outstanding, and 22 million shares of common stock were reserved for employee and director stock options. Dividends on common stock of \$31.4 million were payable as of Dec. 31, 2002.

NOTE 18

Earnings (Loss) Per Share and Per Pro Forma Share

Basic earnings per share (EPS) for 2002 and 2001 were computed using the weighted-average number of common shares outstanding during the period (260.7 million shares and 258.1 million shares, respectively). Diluted EPS were computed taking into account the effect of dilutive potential common shares, calculated to be 1.9 million shares and 5.5 million shares in 2002 and 2001, respectively. These dilutive potential common shares consist of 17.5 million and 21.8 million outstanding stock options in 2002 and 2001, respectively. Two million and one million outstanding stock options were

excluded from the computation of 2002 and 2001 diluted EPS, respectively, because the effect was antidilutive. Basic earnings per pro forma share for 2000 were computed using the weighted-average number of common shares outstanding (258 million shares) immediately after the IPO. Diluted earnings per pro forma share in 2000 were calculated using the common shares outstanding, plus the dilutive effect of common share equivalents totaling 0.5 million shares, based on outstanding stock options. The options expire from 2010 through 2012.

NOTE 19

Supplemental Cash Flow Information

The effect of exchange rate changes on cash and cash equivalents was not material. Cash payments for interest and taxes during 2002 totaled \$81 million and \$75 million, respectively. Cash payments for interest and taxes during 2001 totaled \$113 million and \$174 million, respectively. Monsanto made no cash payments for

interest or taxes during the eight months ended Aug. 31, 2000, because all interest and tax payments during this period were made by Pharmacia. Cash payments for interest and taxes for the last four months of 2000 were \$21 million and \$8 million, respectively.

Noncash transactions with Pharmacia included approximately \$(80) million, \$180 million and \$200 million in 2002, 2001 and 2000, respectively. See Statement of Consolidated Shareowners' Equity for further details.

Noncash transactions for 2000 included a reclassification of \$1.1 billion of long-term debt to short-term debt. In addition, \$2.2 billion of debt transferred to Pharmacia in exchange for additional equity in Monsanto was partially offset by net obligations of approximately \$500 million assumed by Monsanto.

In connection with the acquisition of biotechnology intellectual property assets from Ceres, the company recorded intangible assets and the related obligations, in excess of amounts paid, of \$35 million in noncash transactions in the second quarter of 2002. See Note 8 — Goodwill and Other Intangibles — for further details. Payments on the related obligation will be included in vendor financing payments as they are made.

NOTE 20

Commitments and Contingencies

Contractual obligations: The following table sets forth the company's current estimates of future payments under contracts.

Dollars in Millions	Payments Due by Period						2008 and beyond
	Total	2003	2004	2005	2006	2007	
Long-Term Debt	\$ 856	\$ —	\$ 27	\$ 18	\$ 11	\$ —	\$ 800
Operating Lease Obligations	99	34	22	14	9	6	14
Purchase Obligations:							
Uncompleted additions to property	20	20	—	—	—	—	—
Commitments to purchase inventories	204	104	25	17	17	12	29
Commitment to purchase breeding research	448	45	45	45	45	45	223
R&D alliances and joint venture obligations	524	70	68	68	68	68	182
Other purchase obligations	351	53	53	53	53	53	86
Other Long-Term Liabilities Reflected on the Balance Sheet:							
Vendor financing	25	9	5	5	5	1	—
Total Contractual Obligations	\$2,527	\$335	\$245	\$220	\$208	\$185	\$1,334

Rent expense was \$87 million, \$99 million and \$116 million for the years ended Dec. 31, 2002, 2001 and 2000, respectively.

Guarantees: In November 2002, FIN No. 45, *Guarantors Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees and Indebtedness of Others, an interpretation of FIN No. 5, 57 and 107, and rescission of FIN No. 34*, was issued. FIN 45 elaborates on the disclosures to be made by the guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also requires that a guarantor recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and measurement provisions of this interpretation are applicable on a prospective basis to guarantees issued or modified after Dec. 31, 2002.

Monsanto provides a guarantee to a specialty finance company for certain customer loans. See Note 6 — Customer Financing Program — for additional information.

Monsanto provides guarantees to certain banks that provide loans to Monsanto customers. Terms of the guarantees are equivalent to terms of the bank loans, generally six months. If a customer fails to pay an obligation when due, Monsanto would incur a liability to make these payments. As of Dec. 31, 2002, the maximum potential amount of future payments under these guarantees is approximately \$35 million. Based on the company's current assessment of credit exposure, Monsanto has not recorded a liability related to these guarantees. Monsanto's recourse under these guarantees is limited to the customer, and it is not currently estimable.

Monsanto provides guarantees on behalf of certain suppliers. As of Dec. 31, 2002, a guarantee has been made to a bank financing a supplier's construction of a plant that will be used to supply certain raw materials to a Monsanto facility in Brazil. The term of this guarantee is equivalent to the term of the financing agreements, which are scheduled to be paid by 2008. If the supplier fails to pay the obligations when due, Monsanto would incur a liability to make these payments. As of Dec. 31, 2002, the maximum potential amount of future payments under this guarantee is approximately \$10 million with respect to principal, plus additional amounts with respect to interest and related expenses. The company believes that it is not likely to incur a loss under this guarantee, and it has not recorded any liability related to its obligation under this guarantee. If Monsanto were to incur a loss under this guarantee, Monsanto would have recourse against the supplier and the shareholders of the supplier's parent company pursuant to an agreement entered into by the parties.

Monsanto provides guarantees for minimum revenues on certain community programs to promote civic progress. If the programs do not earn a specified minimum level of revenue, Monsanto would incur a liability to perform under this guarantee. The maximum aggregate potential amount of future payments under these guarantees is approximately \$5 million. These guarantees expire from 2004 through 2010. As of Dec. 31, 2002, based on current levels of revenue earned by these programs, Monsanto has not recorded any liability related to these guarantees. Monsanto has no recourse under these guarantees.

Monsanto may provide and has provided guarantees on behalf of its consolidated subsidiaries for obligations incurred in the normal course of business. Terms range in duration and often are not explicitly defined. Generally, a maximum obligation is not explicitly stated. Because the obligated amounts of these types of guarantees are not explicitly stated, the overall maximum potential amount of future payments under these guarantees cannot be reasonably estimated. Where appropriate, an obligation for such guarantees would be recorded as a liability; nothing was recorded as of Dec. 31, 2002. Because these are guarantees of obligations of consolidated subsidiaries, the company's consolidated financial position is not affected by the issuance of these guarantees.

In connection with its spinoff from Pharmacia, Solutia Inc. (Solutia) assumed and agreed to indemnify Pharmacia for certain liabilities relating to the chemical businesses that were transferred to Solutia (Solutia-Related Liabilities). These include liabilities that were Pharmacia's prior to the Sept. 1, 1997, spinoff of Solutia, and from which Pharmacia could not be released, by operation of law, because of the unavailability of third-party consents, or otherwise. Pursuant to its Sept. 1, 2000 Separation Agreement with Pharmacia, Monsanto agreed to indemnify Pharmacia for the Solutia-Related Liabilities to the extent that Solutia fails to pay, perform or discharge those liabilities. The Solutia-Related Liabilities include litigation, environmental, retiree and all other Pharmacia liabilities that Solutia assumed from Pharmacia pursuant to the spinoff of Solutia. If Solutia is unable to pay, perform or discharge its assumed liabilities or to satisfy its indemnity obligations to Pharmacia, Monsanto could be called upon to do so. Because of the nature and extent of the indemnification, the overall maximum potential amount of future payments cannot

be reasonably estimated. In addition, Monsanto believes that it is unlikely Solutia will fail to satisfy its obligations to Pharmacia. Therefore, Monsanto has not recorded any liability related to this indemnification. Solutia has also agreed to indemnify Monsanto for any liabilities that Monsanto incurs in connection with the Solutia-Related Liabilities. During 2002, Pharmacia and Solutia requested Monsanto's assistance to facilitate the posting of an appeal bond for a Pennsylvania legal action in which Solutia is defending itself and Pharmacia. Monsanto has posted a \$71 million appeal bond and collateralized a portion of the bond with a \$25 million letter of credit. Solutia is required to pay all of Monsanto's out-of-pocket expenses in connection with obtaining the bond. Monsanto does not believe that its participation in posting the appeal bond will have a material adverse effect on the company's financial position, profitability, or liquidity.

Customer Concentrations in Gross Trade Receivables: The following table sets forth by significant customer concentrations Monsanto's gross trade receivables at year end:

Dollars in millions	2002	2001
U.S. Agricultural Product Distributors	\$ 811	\$ 798
Argentina ⁽¹⁾	416	606
European Agricultural Product Distributors	284	238
Brazil ⁽¹⁾	226	473
Mexico ⁽¹⁾	67	85
Asia-Pacific ⁽¹⁾	88	101
Canada ⁽¹⁾	18	50
Other	89	133
Gross Trade Receivables	1,999	2,484
Less: Allowance for Doubtful Accounts	(247)	(177)
Net Trade Receivables	\$1,752	\$2,307

(1) Represents customer receivables within the specified geography.

For further details on the allowance for doubtful trade receivables see Note 5 — Trade Receivables. The company's receivables focus has been centered on, and continues to remain centered on, the key agricultural markets of Argentina and Brazil. Net trade receivables in Argentina and Brazil were \$332 million and \$196 million in 2002, respectively. Net trade receivables in Argentina and Brazil were \$573 million and \$437 million in 2001, respectively.

Argentina: On Feb. 3, 2002, the new government in Argentina announced several reforms intended to stabilize the economic environment. These reforms continue to have an effect on the company's operations in Argentina. For example, the company's sales, margins, and foreign currency transactional gains/losses may be adversely affected based on fluctuations in foreign currency exchange rates and the level of inflation experienced. In addition, the company's ability to repatriate funds from Argentina may be restricted. While the company has prepared its financial statements relating to its Argentine operations on a U.S. dollar functional basis, the company could be required to change its functional currency designation in Argentina based on future government economic reforms. The Argentine agricultural markets continue to be primarily export-oriented, and their export sales are generally denominated in U.S. dollars.

In March 2002, the Argentine government issued a decree establishing a 20 percent export tax on agricultural exports. It also ruled that U.S. dollar-denominated contracts in agricultural markets entered into prior to Jan. 6, 2002 (Predevaluation Contracts), which had been converted to pesos at a 1:1 exchange rate pursuant to an earlier government decree, must be honored at the same exchange rate as the one obtained for exports of the agricultural products that contain the agricultural inputs. This decree was amended on July 2, 2002, with the issuance of Resolution No. 143, which states that the future settlement of the Predevaluation Contracts on farm inputs will be subject to a 25 percent reduction (including the 20 percent export taxes discussed above) on the U.S. dollar price.

In the second quarter of 2002, the company established an allowance of \$154 million pretax for estimated uncollectible receivables in Argentina. Of that amount, approximately \$100 million has been written off against receivables as of Dec. 31, 2002. The company has been able to collect essentially all of its Predevaluation Contracts that were secured with grain, net of the 25 percent reduction. Also, a significant portion of year-to-date sales in Argentina has been made for either cash or grain; as of Dec. 31, 2002, a majority of the net Argentine receivables are secured with grain or other means. While the company cannot determine how government actions and economic conditions in Argentina will affect the value of net receivables outstanding as of Dec. 31, 2002, the company continues to pursue customer collections aggressively. Management's current assessment of the situation is that the collectibility of the receivables has stabilized and that the allowance balance is adequate.

Remediation Obligations: Monsanto's Statement of Consolidated Financial Position includes accrued liabilities of \$12 million as of both Dec. 31, 2002 and 2001, for the remediation of existing and former manufacturing facilities and certain off-site disposal and formulation facilities. Monsanto's future remediation expenses are affected by a number of uncertainties. These uncertainties include, but are not limited to, the method and extent of remediation, the percentage of material attributable to Monsanto at the sites relative to that attributable to other parties, and the financial capabilities of the other potentially responsible parties. Monsanto does not expect the resolution of such uncertainties to have a material adverse effect on its financial position, profitability or liquidity.

Litigation: Monsanto is defending and prosecuting litigation in its own name. In addition, Monsanto is defending and prosecuting certain cases that were brought in Pharmacia's name and for which Monsanto assumed responsibility upon the separation of its businesses from those of Pharmacia. Such matters relate to a variety of issues. Certain of the lawsuits seek damages in very large amounts, or seek to restrict the company's business activities. Although the results of litigation cannot be predicted with certainty, it is management's belief that the final outcome of these lawsuits will not have a material adverse effect on Monsanto's financial position, profitability or liquidity.

NOTE 21

Segment and Geographic Data

Monsanto manages its business in two segments: Agricultural Productivity, and Seeds and Genomics. The Agricultural Productivity segment consists of the crop protection products, animal agriculture, residential lawn-and-garden products, and environmental technologies businesses. The Seeds and Genomics segment consists of the global seeds and related traits businesses, and biotechnology technology platforms. Sales between segments were not significant.

Dollars in millions	Agricultural Productivity	Seeds and Genomics	Total
Net Sales⁽¹⁾			
2002	\$3,088	\$1,585	\$4,673
2001	3,755	1,707	5,462
2000	3,885	1,608	5,493
EBIT⁽²⁾			
2002	366	(105)	261
2001	772	(240)	532
2000	1,099	(581)	518
Depreciation and Amortization Expense			
2002	237	223	460
2001	226	328	554
2000	209	337	546
Restructuring and Other Special Items			
2002	52	72	124
2001	137	76	213
2000	22	239	261
Equity Affiliate Expense			
2002	—	(43)	(43)
2001	—	(41)	(41)
2000	(3)	(31)	(34)
Total Assets			
2002	5,115	3,775	8,890
2001	5,923	5,506	11,429
2000	6,104	5,622	11,726
Property, Plant and Equipment Purchases			
2002	135	89	224
2001	279	103	382
2000	439	143	582
Investment in Equity Affiliates			
2002	1	37	38
2001	1	49	50
2000	17	66	83

(1) As discussed in Note 2 — Significant Accounting Policies (Revenue Recognition) —

Monsanto changed its marketing approach on certain trait fees, which resulted in certain trait revenue being recognized earlier — in the second half of 2001 rather than in the first half of 2002.

(2) Earnings (loss) before cumulative effect of accounting change, interest and income taxes; see the following table for reconciliation.

A reconciliation of earnings before cumulative effect of accounting change, interest and income taxes (EBIT) to income before cumulative effect of accounting change for each year follows:

Dollars in millions	2002	2001	2000
EBIT	\$261	\$ 532	\$ 518
Interest Expense — Net	(59)	(73)	(184)
Income Tax Provision	(73)	(164)	(159)
Income Before Cumulative Effect of Accounting Change	\$129	\$ 295	\$ 175

Although inflation is relatively low in most of Monsanto's major markets, it continues to affect operating results. To mitigate the effect of inflation, Monsanto implemented measures to control costs, to improve productivity, to manage capital expenditures and working capital, and to raise selling prices when government regulations and competitive conditions permit. In addition, the current costs of replacing certain assets are estimated to be greater than the historical costs presented in the financial statements. Accordingly, the depreciation expense reported in the Statement of Consolidated Operations would be greater if it were stated on a current-cost basis.

Net sales and long-lived assets are attributed to the geographic areas of relevant Monsanto legal entities. For example, a sale from the United States to a customer in Latin America is reported as a U.S. export sale.

Dollars in millions	Net Sales to Unaffiliated Customers Excluding Inter-area Sales			Long-Lived Assets		
	2002	2001	2000	2002	2001	2000
United States	\$2,986	\$3,358	\$3,089	\$2,965	\$4,853	\$5,127
Latin America	571	923	1,103	554	857	801
Europe-Africa	619	626	635	417	597	656
Asia-Pacific	316	370	449	112	128	131
Canada	181	185	217	34	37	14
Total	\$4,673	\$5,462	\$5,493	\$4,082	\$6,472	\$6,729

NOTE 22

Other Expense — Net

The significant components of other expense (income) were:

Dollars in millions	2002	2001	2000
Litigation Matters — Net	\$ 17	\$ 60	\$—
Equity Affiliate Expense — Net (see Note 23 — Equity Affiliates)	43	41	34
Foreign-Currency Transaction Losses — Net	36	32	22
Loss (Gain) on Sale of Businesses and Assets	(24)	—	2
Gains Realized Upon Sale of Equity Securities	(12)	(8)	—
Deferred Payout Provision Related to Past Business Divestiture	—	(8)	—
Impairments of Equity Investments and Securities	—	8	—
Early Extinguishment of Debt	—	4	—
Other Miscellaneous Income	(2)	(2)	(9)
Other Expense — Net	\$ 58	\$127	\$49

Charges for litigation matters in 2002 primarily related to an agreement among Monsanto and certain subsidiaries, E.I. du Pont de Nemours (DuPont) and DuPont's Pioneer Hi-Bred International Inc. (Pioneer) subsidiary. Under the agreement, the parties agreed to resolve a number of business and patent disputes among the parties. The agreement also included new royalty and business arrangements, including the granting of technology licenses.

Litigation matters in 2001 included charges of \$82 million and a gain of \$22 million related to the three matters discussed below.

In November 2001, a federal appeals court upheld a 1999 judgment against DEKALB Genetics Corporation (which is now a wholly owned subsidiary of Monsanto) in a licensing dispute brought by Aventis CropScience S.A. As a result, a reserve of \$50 million for punitive damages was recorded in other expense in 2001. The reserve was included in miscellaneous short-term accruals in the Statement of Consolidated Financial Position as of Dec. 31, 2001, and was paid during 2002.

In January 2002, Monsanto and Central Garden and Pet (Central Garden) announced settlement of all litigation related to Central Garden's distributorship of lawn-and-garden products during the 1990s for a divested business of the former Monsanto. As a result, the company recorded a net pretax charge of \$32 million in other expense in 2001; Central Garden has paid Monsanto \$5.5 million for products shipped to Central Garden under the distribution agreement; and, Central Garden's Pennington subsidiary also agreed to purchase \$2 million of Monsanto's glyphosate material under an existing supply agreement with Monsanto.

In October 2001, Monsanto and DuPont announced the resolution of issues related to Monsanto's MON810 *YieldGard* insect-protected corn trait used in corn hybrids sold by Pioneer. The resolution includes the dismissal of several lawsuits regarding the development, licensing and sale of MON810 *YieldGard* products. Under this agreement, Pioneer, will continue to sell MON810 *YieldGard* insect-protected corn hybrids under a royalty-bearing license from Monsanto. In addition, Monsanto received a one-time fee of approximately \$56 million. The major components of this fee relate to Pioneer's past use of Monsanto's MON810 *YieldGard* product and royalties related to Pioneer's sales of MON810 *YieldGard* products during 2001. The portion of the fee related to Pioneer's past use of the product and settlement of other issues (\$22 million) was recorded as other income; the royalties related to MON810 *YieldGard* products sold during 2001 were recorded as trait revenues in the fourth quarter of 2001.

NOTE 23

Equity Affiliates

Equity affiliate expense includes investments in a number of affiliates that are accounted for using the equity method. Equity affiliate expense from Renessen LLC, a 50-50 owned and funded joint venture of Monsanto and Cargill Incorporated, was \$41 million in 2002, \$41 million in 2001, and \$31 million in 2000, and represented substantially all of equity affiliate expense. Summarized financial information related to Renessen LLC is as follows:

Dollars in millions	2002	2001	2000
Current Assets	\$ 8	\$ 1	\$ —
Noncurrent Assets	2	2	3
Current Liabilities	14	11	12
Noncurrent Liabilities	1	—	—
Net Sales	\$ 2	\$ 1	\$ —
Gross Margin	(1)	—	—
Research and Development Expenses	61	64	49
Net Loss	(82)	(82)	(63)

In 2002, Monsanto performed \$47 million of R&D for Renessen LLC, which was recovered at cost.

NOTE 24

Advertising Costs

Costs for producing and communicating advertising for the various brands and products were charged to selling, general and administrative expenses as they were incurred, or expensed ratably during the year in relation to revenues or certain other performance measures. Advertising costs were \$70 million, \$96 million and \$103 million in 2002, 2001 and 2000, respectively.

NOTE 25

Related-Party Transactions

On Sept. 1, 2000, Monsanto entered into a master transition services agreement with Pharmacia, its then majority shareowner. Some terms under this master agreement expired on Dec. 31, 2001. New terms were negotiated in 2002, which do not differ materially from previously agreed terms. Under these agreements, Monsanto provides certain administrative support services to Pharmacia, and Pharmacia primarily provides information technology and human resources support for Monsanto. These agreements continue to be effective after Pharmacia's Aug. 13, 2002, spinoff of Monsanto.

During the period from Jan. 1, 2002, to Aug. 13, 2002, Monsanto recognized expenses of \$22 million, and recorded a reimbursement of \$27 million, for costs it incurred on behalf of Pharmacia. During 2001, Monsanto recognized expenses of \$70 million and recorded a reimbursement of \$48 million for costs incurred on behalf of Pharmacia. During the last four months of 2000, Monsanto recognized expenses of \$25 million and recorded a reimbursement of \$24 million for costs it incurred on behalf of Pharmacia. As of Dec. 31, 2002, the company had a net receivable balance of \$2 million with Pharmacia. As of Dec. 31, 2001, the company had a net payable balance (excluding dividends payable) of \$43 million with Pharmacia. Transition services, employee benefits, capital project costs, and information technology costs comprised both balances.

From the IPO closing date until November 2002, Pharmacia provided loan and deposit management services to Monsanto's ex-U.S. subsidiaries. Since November 2002, Monsanto has maintained its cash-management strategy by working with third-party banks. Until Aug. 13, 2002, Pharmacia was also the counterparty for some of Monsanto's foreign-currency exchange contracts. Subsequent to Aug. 13, 2002, Monsanto has maintained its foreign-currency exchange strategies by working with third-party banks. As of Dec. 31, 2001, the fair value of the company's outstanding foreign-currency exchange contracts with Pharmacia was a loss of \$7 million. In addition, Monsanto pays a fee to Pharmacia because Pharmacia is the named party on a guarantee of debt of a Monsanto subsidiary, which was issued prior to Monsanto's separation from Pharmacia on Sept. 1, 2000. Fees for these services are comparable to those that Monsanto would have incurred with a third party.

On Aug. 13, 2002, Monsanto repaid its outstanding short-term debt to Pharmacia and entered into a new short-term debt arrangement with Pharmacia for \$150 million. This new short-term debt was repaid in August with a portion of the proceeds received from Monsanto's issuance of senior notes. As of Dec. 31, 2001, Monsanto was in a net borrowing position of \$224 million with Pharmacia. Interest rates were comparable to those that Monsanto would have incurred with a third party.

Monsanto and Pharmacia entered into an agreement whereby Pharmacia paid Monsanto approximately \$40 million, as payment for certain expenses incurred by Monsanto relating to the spinoff of Monsanto by Pharmacia effective Aug. 13, 2002. Monsanto expects to use these funds to pay for the separation of the Monsanto and Pharmacia research and development organizations, legal activities required to definitively separate the ownership of certain intellectual property, and other types of activities that arose directly as a result of the spinoff from Pharmacia. Remaining funds to be spent as of Dec. 31, 2002, are recorded in short-term accruals and the company expects to fully utilize these funds for their designated purposes by June 2003.

NOTE 26

Quarterly Data (Unaudited)

Dollars in millions, except per share amounts

	Net Sales ⁽²⁾	Gross Profit	Income (Loss) Before Cumulative Effect of Accounting Change	Cumulative Effect of Accounting Change (Note 5)	Net Income (Loss)	Diluted Earnings (Loss) per Share ⁽¹⁾		
						Income (Loss) Before Cumulative Effect of Accounting Change	Cumulative Effect of Accounting Change (Note 5)	Net Income (Loss)
2002								
1st Quarter	\$1,221	\$ 604	\$ 86	\$(1,822)	\$(1,736)	\$ 0.33	\$(6.92)	\$ (6.59)
2nd Quarter	1,553	818	147	—	147	0.56	—	0.56
3rd Quarter	679	201	(165)	—	(165)	(0.63)	—	(0.63)
4th Quarter	1,220	557	61	—	61	0.23	—	0.23
Total Year	\$4,673	\$2,180	\$ 129	\$(1,822)	\$(1,693)	\$ 0.49	\$(6.94)	\$ (6.45)

2001								
1st Quarter	\$1,306	\$ 607	\$ 55		\$ 55	\$ 0.21		\$ 0.21
2nd Quarter	2,011	1,189	389		389	1.47		1.47
3rd Quarter	936	384	(45)		(45)	(0.17)		(0.17)
4th Quarter	1,209	465	(104)		(104)	(0.40)		(0.40)
Total Year	\$5,462	\$2,645	\$ 295		\$ 295	\$ 1.12		\$ 1.12

(1) Because of the quarterly changes in the effects of dilutive stock options in 2002, correlated with the average quarterly stock price, quarterly earnings (loss) per share do not total to the full-year amount. Additionally, because Monsanto reported a loss before cumulative effect of accounting change in the third and fourth quarters of 2001, generally accepted accounting principles required diluted loss per share to be calculated using weighted-average common shares outstanding, excluding common stock equivalents. As a result, the quarterly earnings (loss) per share do not total to the full-year amount.

(2) Historically, Monsanto generates the majority of its sales during the first half of the year, primarily because of the timing of the planting season in the Northern Hemisphere.

		Dividends per Share				
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
2002		\$ 0.12	\$ 0.12	\$ 0.12	\$ 0.12	\$ 0.48
2001		\$ 0.12	\$ 0.12	\$ 0.12	\$ 0.12	\$ 0.48

		Common Stock Price				
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
2002	High	\$ 33.13	\$ 33.29	\$ 19.10	\$ 20.47	\$ 33.29
	Low	28.30	17.27	13.01	13.55	13.01
2001	High	\$35.680	\$38.470	\$38.800	\$37.900	\$38.800
	Low	26.875	28.800	30.900	28.600	26.875

Management Report

Monsanto Company's management is responsible for the fair representation and consistency, in accordance with generally accepted accounting principles, of all the financial information included in this annual report. Where necessary, the information reflects management's best estimates and judgments.

Management is also responsible for maintaining an effective system of accounting controls. The purpose of these controls is to provide reasonable assurance that Monsanto's assets are safeguarded against material loss from unauthorized use or disposition (taking into consideration the cost of control versus the risk of loss) and that authorized transactions are properly recorded to permit the preparation of accurate financial information. The effectiveness of internal control is maintained by careful personnel selection and training, division of responsibilities, establishment and communication of policies, and ongoing internal reviews and audits. Management believes that Monsanto's system of internal control as of Dec. 31, 2002, was effective and adequate to accomplish the objectives described above. Monsanto's consolidated financial statements have been audited by Deloitte & Touche LLP, independent auditors. Their audits were conducted in accordance with auditing standards generally accepted in the United States, and included a review of financial controls, tests of accounting records, and other procedures as they considered necessary in the circumstances.

The audit and finance committee, composed entirely of outside directors, meets regularly with management and with the independent auditors to review accounting, financial reporting, auditing and internal control matters. The committee has direct and private access to the external and internal auditors.



Frank V. AtLee III
Chairman, President and Chief Executive Officer



Terrell K. Crews
Executive Vice President and Chief Financial Officer

Independent Auditors' Report

To the Shareowners of Monsanto Company:

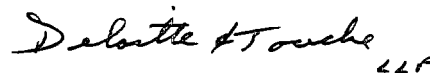
We have audited the accompanying statement of consolidated financial position of Monsanto Company and subsidiaries as of Dec. 31, 2002 and 2001, and the related statements of consolidated operations, cash flows, shareowners' equity and comprehensive income (loss) for each of the three years in the period ended Dec. 31, 2002. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Monsanto Company and subsidiaries as of Dec. 31, 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended Dec. 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 8 to the consolidated financial statements, in 2002 Monsanto Company changed its method of accounting for goodwill to conform to Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*.

As discussed in Note 2 to the consolidated financial statements, in 2000 Monsanto Company changed its method of recognizing revenue to conform to the Securities and Exchange Commission's Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements*.



St. Louis, Missouri
Feb. 5, 2003



Frank V. AtLee III, 62, is chairman of the board, president and chief executive officer of Monsanto. He is a retired president of the former American Cyanamid Company and chairman of the former Cyanamid International — companies involved in the discovery, development, manufacturing and marketing of medical and agricultural products. He has served Monsanto's board as a director and chairman since June 2000, and chairs the board's executive committee. Mr. AtLee was named Monsanto's president and chief executive officer on Dec. 18, 2002. He also serves on the boards of Antigenics Inc. and Nereus Pharmaceuticals, Inc.



Michael (Mickey) Kantor, 63, is a former U.S. secretary of commerce and a former U.S. trade representative. He is currently a partner in the international law firm of Mayer, Brown, Rowe & Maw, which provides legal services to Monsanto. Mr. Kantor has served as a director on the Monsanto board since June 2000; however, given new independence standards adopted by Monsanto's board of directors, he will not be standing for reelection. He is a member of the board's public policy and corporate responsibility, and science and technology committees. Mr. Kantor also serves on the board of Pharmacia Corporation.



Gwendolyn S. King, 62, is president of Podium Prose, a speakers bureau. Prior to joining Podium Prose, she had retired as senior vice president, corporate and public affairs, for PECO Energy Company, a diversified utility company. From 1989-1992, Mrs. King served as the eleventh Commissioner of Social Security. In 2001, she was appointed to President George W. Bush's Commission to Strengthen Social Security. Mrs. King has served as a director on the Monsanto board since February 2001. She chairs the board's public policy and corporate responsibility committee, and is a member of the people and compensation, and nominating and corporate governance committees. Mrs. King also serves on the boards of Lockheed Martin Corporation, Marsh and McLennan Companies, Inc., Pharmacia Corporation, and Countrywide Financial Corporation.



Sharon R. Long, Ph.D., 51, is professor of biological sciences and dean of the School of Humanities and Sciences at Stanford University. Dr. Long was also an investigator for the Howard Hughes Medical Institute. In recognition of her research, she has been elected to the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Association. Dr. Long has served as a director on the Monsanto board since February 2002. She chairs the board's science and technology committee, and is a member of the public policy and corporate responsibility committee.



C. Steven McMillan, 57, is chairman of the board, president and chief executive officer of Sara Lee Corporation, a global consumer packaged goods company whose brands include Sara Lee, Douwe Egberts, Hillshire Farm, Hanes and Playtex. He has served as a director on the Monsanto board since June 2000. Mr. McMillan chairs the board's people and compensation committee, and is a member of the restricted stock grant, audit and finance, and nominating and corporate governance committees. He also serves on the boards of Bank of America Corporation, Pharmacia Corporation and Sara Lee Corporation.

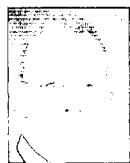


William U. Parfet, 56, is chairman and chief executive officer of MPI Research Inc., a preclinical toxicology research laboratory. He has served as a director on the Monsanto board since June 2000. Mr. Parfet chairs the board's audit and finance committee, and is a member of the people and compensation, and executive committees. He also serves on the boards of CMS Energy Corporation, PAREXEL International Corporation, Pharmacia Corporation and Stryker Corporation.

EXECUTIVE AND OTHER OFFICERS



George H. Poste, 58, is chief executive of Health Technology Networks, a consulting group specializing in the application of genomics technologies and computing in healthcare. Dr. Poste is a member of the Defense Science Board of the U.S. Department of Defense, and chairs that group's Task Force on Bioterrorism. He has served on the Monsanto board since February 2003. Dr. Poste also serves on the boards of AdvancePCS, Maxygen, Inc., Illumina, Inc., and Orchid BioSciences, Inc.



Robert J. Stevens, 51, is president and chief operating officer of Lockheed Martin Corporation, a firm engaged in the research, design, development, manufacture and integration of advanced-technology systems, products and services. In February 2001, he was appointed to President George W. Bush's Commission on the Future of the United States Aerospace Industry. He has served as a director on the Monsanto board since August 2002. Mr. Stevens chairs the board's nominating and corporate governance committee, and is a member of the audit and finance committee. Mr. Stevens also serves on the board of Lockheed Martin Corporation.

(Note: Ages as of March 1, 2003)

Chairman of the Board,
President and Chief Executive Officer
Frank V. AtLee III

Executive Vice President and
Chief Operating Officer
Hugh Grant

Executive Vice President and
Chief Financial Officer
Terrell K. Crews

Executive Vice President and
Chief Technology Officer
Robert T. Fraley, Ph.D.

Executive Vice President,
Secretary and General Counsel
Charles W. Burson

Senior Vice President,
Government Affairs
Donald K. Bandler

Senior Vice President,
Public Affairs
Sarah Hull

Senior Vice President,
Human Resources
John M. Murabito

Vice President, North America
Carl M. Casale

Vice President and Controller
Richard B. Clark

Vice President, Manufacturing
Mark J. Leidy

Vice President and Treasurer
Robert A. Paley

Vice President, Strategy
Gerald A. Steiner

President, Animal Agricultural Group
Cheryl P. Morley

Chief Information Officer
Janet M. Holloway

This list includes executive officers as defined by the U.S. Securities and Exchange Commission; it is current as of March 1, 2003. Additional information on executive officers appears in Monsanto's Form 10-K.

SHAREOWNER INFORMATION

Dividend Policy

The declaration and payment of quarterly dividends is made at the discretion of Monsanto's board of directors. The dividend is reviewed by the board quarterly.

Transfer Agent and Registrar

To request or send information contact:

Mellon Investor Services LLC
P.O. Box 3315
South Hackensack, New Jersey 07606
U.S.A.

Telephone:

(888) 725-9529

Toll free within the United States and Canada

(201) 329-8660

Outside the United States and Canada

For the hearing-impaired

(800) 231-5469

Toll free within the United States and Canada

(201) 329-8354

Outside the United States and Canada

On the Internet:

If you are a registered shareowner, you can access your Monsanto account online by using the Investor ServiceDirect feature at the Mellon Investor Services Web site at <https://vault.melloninvestor.com/isd/>.

Electronic Delivery and Proxy Voting

Monsanto offers its shareowners the opportunity to receive proxy statements, annual reports, prospectuses, and other shareowner materials electronically through the Internet, instead of by mail.

If you are a registered shareowner, you may consent to electronic delivery by (1) marking and returning your consent on your proxy card, (2) submitting your consent when you vote over the Internet by accessing the Mellon Investor Services Web site at <http://www.eproxy.com/mon>, or (3) submitting your consent when you vote by telephone via Mellon Investor Services at 1-800-435-6710. In addition, you may see these materials on the Internet at any time by accessing your Monsanto shareowner account online via Investor ServiceDirect, a feature of Mellon Investor Services, at <https://vault.melloninvestor.com/isd/>.

If your shares are held in street name by a bank or broker you nominated, you may choose electronic delivery over the Internet at <http://www.proxyvote.com> through your bank or broker.

Additional Shareowner Information

Shareowner, financial and other information about Monsanto is available to you free of charge from several sources throughout the year. These materials include quarterly earnings statements, significant news releases, and Forms 10-K and 10-Q, which are filed with the U.S. Securities and Exchange Commission.

On the Internet:

You can find financial and other information, such as significant news releases, Forms 10-K and 10-Q, and the text of this annual report, on the Internet at <http://www.monsanto.com>.

By writing:

You can also request these materials by writing to:

Monsanto Company — Materiallogic
800 North Lindbergh Boulevard
St. Louis, Missouri 63167
U.S.A.

Additional Information about Monsanto

Report on the New Monsanto Pledge

After April 1, 2003, you can read a progress report summarizing Monsanto's accomplishments toward fulfilling its Pledge on the Internet at <http://www.monsanto.com>.

Annual Meeting

The annual meeting of Monsanto shareowners will be held at 1:30 p.m. on Thursday, April 24, 2003, in K Building at the company's offices at 800 North Lindbergh Boulevard, St. Louis, Missouri. A formal notice of the meeting and a proxy statement are sent to each shareowner.

MON Monsanto's stock is traded principally on the
LISTED New York Stock Exchange. Our symbol is MON.
NYSE®

Investor ServiceDirect is a service mark of Mellon Investor Services.

Terms specific to our company or industry are defined in the glossary on page 16.

Trademarks and service marks owned or licensed by Microsoft and its subsidiaries are indicated by special type throughout this publication.

Unless otherwise indicated by the context, references to *Microsoft products* in this report mean *Microsoft Windows* operating systems and other proprietary-based hardware, all our products are under legal and patent protection.

This annual report is printed on recycled paper, and contains at least 10 percent postconsumer waste.

© 2000 Microsoft Company

MONSANTO



800 North Lindbergh Boulevard • St. Louis, Missouri 63167 • U.S.A. • www.monsanto.com