Annual Report 1987

Monsanto

Our success depends upon meeting customer needs through a steady stream of new products.

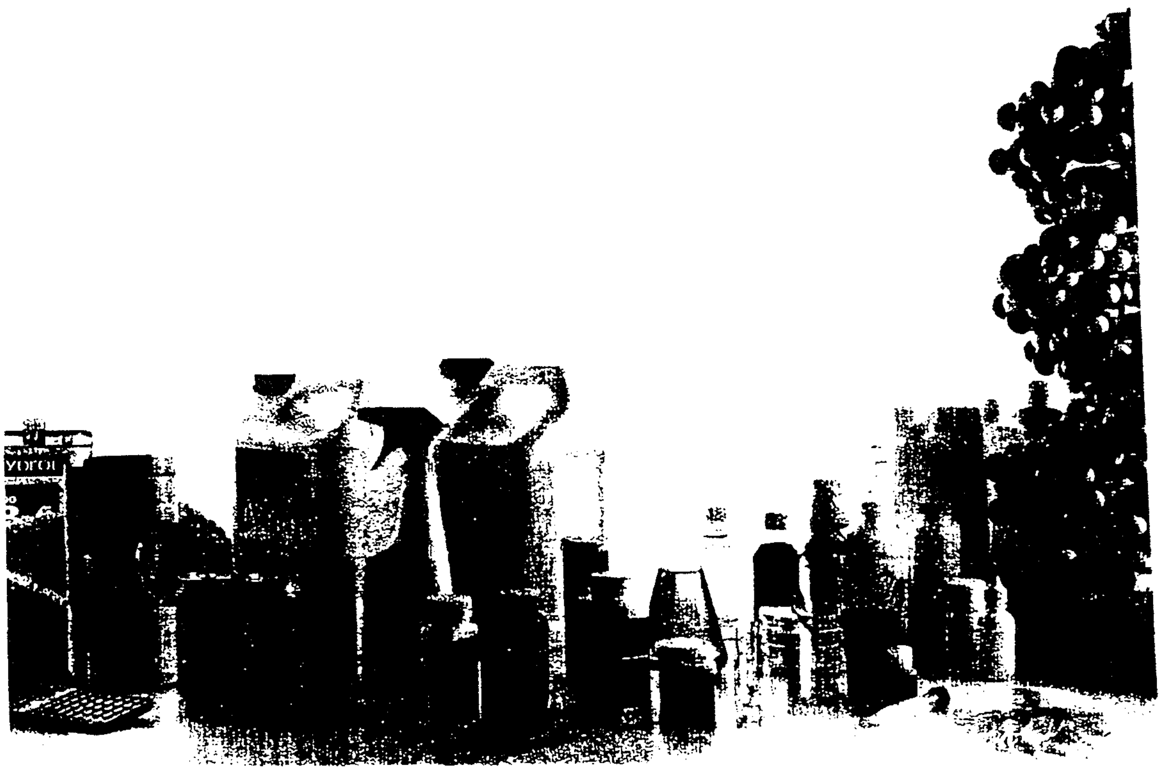


TABLE OF CONTENTS

MONSANTO'S COMMITMENTS

Monsanto Company makes and markets high-value chemical and agricultural products, pharmaceuticals, low-calorie sweeteners, industrial process equipment, man-made fibers, plastics and electronic materials.

In doing so, we are committed to serving the interests of all our stake holders around the world by:

- Aiming for a consistent and superior return on equity for our shareowners,
- Meeting the needs of customers with the highest standards of value, quality and service,
- Providing employees with safe and rewarding work in an environment where each has an equal opportunity to succeed, and
- Striving for a lasting and rewarding partnership with neighbors.

ON THE COVER

Monsanto depends upon a steady flow of products, represented by established leaders like carpet fibers, plastics, hydraulic fluids, low-calorie sweeteners and electronic materials; by new herbicides, process controls and pharmaceuticals; and by future products emerging from research.

OPERATIONAL HIGHLIGHTS

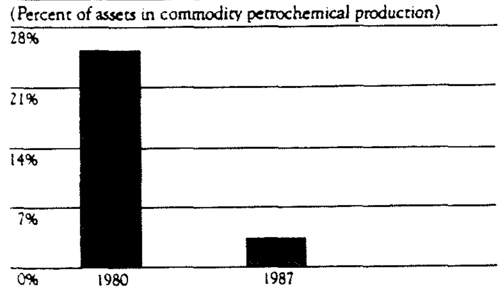
Monsanto Company and Subsidiaries

(Dollars in millions, except per share)	**1987**	1986	1985
Net Sales	**$7,639**	$6,879	$6,747
Net Income (Loss)	**$ 436**	$ 433	$ (98)
Per Share:			
Net Income (Loss)	**$ 5.63**	$ 5.55	$(1.27)
Dividends	**2.75**	2.575	2.45
Shareowners' Equity	**52.65**	48.69	44.38
Depreciation and Amortization	**$ 679**	$ 780	$ 599
Cash Provided by Operations	**$ 902**	$ 960	$ 535
Research and Development Expenses	**$ 557**	$ 523	$ 470
Return on Shareowners' Equity	**11%**	12%	(3)%
Percent of Total Debt to Total Capitalization	**35%**	35%	45 %

STRATEGIC CHANGES SINCE 1980

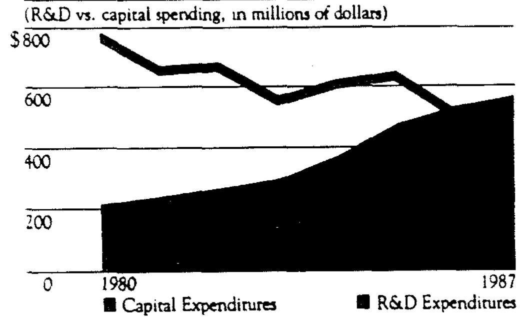
Monsanto moves away from commodities . . .

(Percent of assets in commodity petrochemical production)



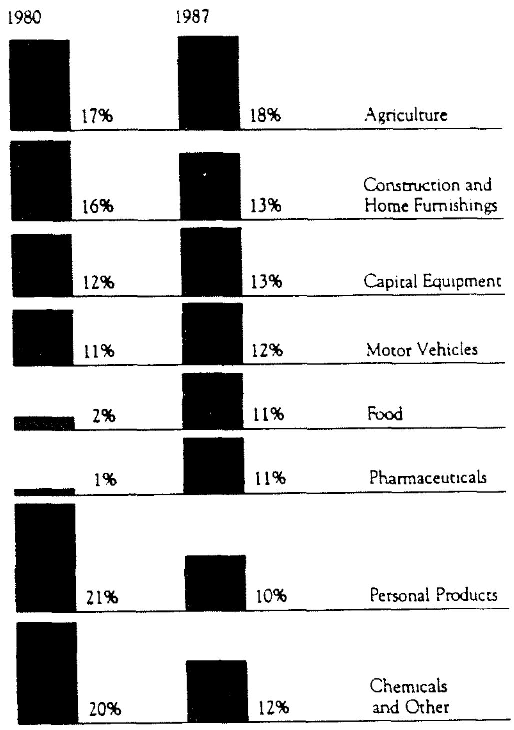
into knowledge-intensive areas . . .

(R&D vs. capital spending, in millions of dollars)



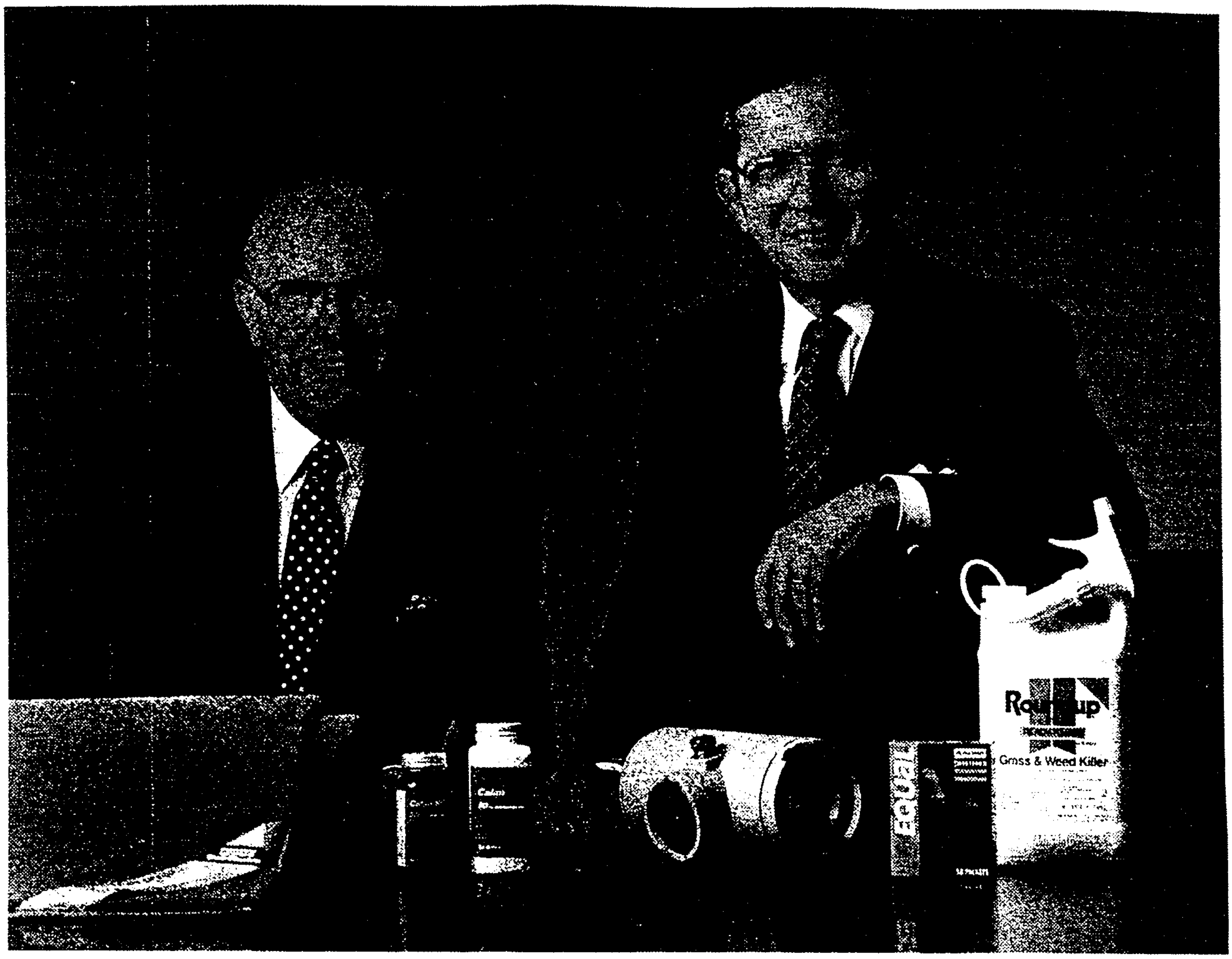
and new businesses strengthen our market mix.

(Percent of total sales)



DSW 021728

STLCOPCB4007037



Richard J. Mahoney, Chairman and Chief Executive Officer (right), and Earle H. Harbison, Jr., President and Chief Operating Officer, with products made by Monsanto Company and its subsidiaries.

DSW 021729

1987: A Good Year For Our Stake Holders

It was a good year for Monsanto, with much to be proud of — a year clearly moving us in the directions we've set.

This letter serves as a progress report on our overall goal to place Monsanto among the handful of great industrial enterprises in the world — the best in what we choose to do — measured by consistent returns for our many stake holders.

In the 1985 and 1986 annual report letters, I discussed promises made to our stake holders — the shareowners, customers, employees and neighbors. The interests of these stake holders are properly linked. We can serve our shareowners well only when we have served our customers well, when our people are highly innovative and productive and, in our mix of chemical-related businesses, when our neighbors and those who act for them grant us the right to operate.

For our shareowners, we have promised to aim for a return on equity in the 20 percent range. That extraordinary earnings level has historically brought shareowners superior market returns. Our restructured business mix *can* get us there by the mid-1990s, and we intend to make it happen.

The Agricultural and Chemical Companies, which represent about two-thirds of our sales and half of our assets, met that standard in 1987. But overall, the corporation's return on equity was only a little more than halfway to the goal at 11 percent. Fisher, our silicon business, Searle and NutraSweet were below the longer-term target, although our accounting for the NutraSweet acquisition resulted in higher cash flow but lower aftertax earnings, and we are deliberately putting heavy up-front research money into Searle to accelerate its development.

Setting that aside, however, we have said on a number of occasions that the target of 20 percent return on equity will be met when the Searle pharmaceuticals asset moves toward earnings at its industry standard while the other major Monsanto units perform at the *top* of their respective industries.

Sales of the family of *Calan* calcium-blocker products passed $130 million in the year. This strong performance was a landmark achievement for Searle. In order to deliver its contribution to Monsanto's goals, Searle needs to duplicate that effort with other products. Two promising products now nearing commercialization in major markets are *Cytotec* peptic ulcer drug, for which clearance to sell is expected in the United States, United Kingdom and Japan, and *Kerlone*, a beta blocker. Searle must also have timely launches from among candidate products such as lomefloxacin, a promising anti-infective; carbetimer, an anticancer agent; and other products in or nearing clinical evaluation.

Overall, the total corporation is in very good financial shape. Our debt to total capitalization remains at a very healthy 35 percent. With leadership from our agricultural and chemicals units, earnings for Monsanto increased by 20 percent over 1986, if we eliminate one-time gains from sales of assets and other nonrecurring items. Three-fourths of the year-to-year gain came from improved operations and one-fourth from translation gains due to the weaker U.S. dollar. Altogether a fine result, considering that the world economy grew by only 2 to 3 percent.

Although business unit income is the driving force to the longer-term goals, we are also addressing the equity part of the return-on-equity calculation. We can and will supplement business unit performance by the prudent use of cash to buy in shares. Overall we purchased approximately four million shares during 1987 and have authority for another four million in 1988. In addition to share repurchases, we will continue to address any underperforming assets as we have in the past.

For the business units, then, 1987 was a fine year. We generally achieved good results and good progress. The elements to reach our 20 percent return-on-equity goal are clear — but it's also clear that their *full* accomplishment remains in the "yet-to-come" category. We are confident that we'll attain this goal with *demonstrated* improvement year to year.

Later in this annual report, we have outlined the tasks ahead and specific progress against targets. As with all companies, two basics — product quality and cost reduction — get a heavy call.

A third essential to a corporate strategy weighted as ours is towards R&D is the success of new products. There is a great deal to report on products nearing commercialization.

Among these are the Searle pharmaceutical candidates mentioned above; in the Agricultural Company, new herbicide products and innovative applicator systems, as well as BST and PST for dairy and pork productivity improvement; a variety of new Chemical Company products being developed with customers for early commercialization; new flowmeter and process-instrumentation products at Fisher; and *Simplesse* natural fat substitute recently announced by NutraSweet for an entirely new class of low-fat, reduced-calorie foods. You'll be hearing more about these soon.

For our customer stake holders, 1987 was a year of renewed emphasis on giving them what they want, when they want it, and at competitive pricing. As evidence of this, several Monsanto units were cited by customers for high-quality products and services and product innovation. For example, the Chemical Company has received awards from General Motors, Ford Motor Company, GE Appliances, Lever Brothers, General Tire and others for excellence in products and performance. Searle received a flood of praise for its unique *Patient Promise* and *Calan For Patients in Need* programs. Customers of *Roundup* herbicide were rewarded with reduced prices and new, useful product forms, which brought over 25 percent more volume — a profitable gain for both of us. And agricultural distributors rated our customer service at the top of the industry for the eighth year in a row.

We've always considered ourselves customer oriented, but lessons from international competition and our own intensive efforts these past couple of years have shown that we have only begun to tap the potential in our product and customer base.

For our employees, 1987 saw us finally able to direct our full attention to building on their capabilities and personal goals after several years of necessary, but painful, restructuring. We have promised to provide safe, meaningful and rewarding work in an environment in which each person has an equal opportunity to succeed. We intend to ensure that Monsanto is a great place for our people to invest in their careers.

New incentive systems aimed more directly at business and individual performance are being put into place and are coupled far more closely to shareowner rewards. Significant steps have been taken to let our people get their jobs done with their full capability and with minimum interference. A true spirit of "can do" is becoming obvious throughout the Company.

Our employee safety record is good, but not yet at the level we aspire to as a great corporation. The chemical industry traditionally is among the safest of all industries, and Monsanto is near the top, but not yet the leader. This is receiving top priority from management and operating units.

For our neighbors and the general public, we performed well throughout 1987. We operated without any significant incidents in our 100-plus plants and facilities worldwide. This is a never-ending goal for a company that necessarily deals with hazardous materials. Our environmental efforts continued at a high level — more than 1,000 people at a cost of nearly $250 million — a necessary cost if we are to enjoy the trust of the communities in which we operate.

Other efforts around the world included supporting a 4-H project that provides leadership skills to 350,000 farm youth, helping an Australian hospital improve the quality of health care in a Monsanto community, and a three-decade commitment to fostering scientific understanding and careers in science for students.

This letter has summarized the year — and our goals. There *is* much to be proud of. There are more new things happening now than we've seen in many years. We're delivering on our promises.

In April 1988, Dr. Jean Mayer will retire after 17 years as a member of the Board of Directors, having reached the mandatory retirement age. His sound technical advice, good counsel and active personal interest in all aspects of the Company's new direction will be missed. Dr. Mayer has been honored throughout the world for his contributions to humanity. He has honored us by his years of service to Monsanto.

Richard J. Mahoney
Chairman and Chief Executive Officer

March 7, 1988

DSW 021731

A STEADY STREAM OF NEW PRODUCTS

by Earle H. Harbison, Jr., President and Chief Operating Officer, Monsanto Company

Monsanto is becoming increasingly knowledge-intensive rather than capital-intensive as we seek to introduce a steady stream of new products to the market. We use that knowledge to develop products that satisfy basic human needs, among them health, food and shelter.

The Company generates a flow of new and renewed products using many approaches.

A new use can give new life to an established product. For example, *Saflex* interlayer, used in automobile safety glass for 50 years, today increasingly adds security and safety in architectural uses.

Product renewal can come from value added through quality improvements, and so we continue to increase emphasis on quality in each operating company.

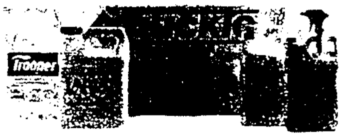
New formulations and properties can also create renewed products. For instance, by tailoring formulations and mixes to meet specific market needs, Monsanto Agricultural Company has greatly expanded the uses of its herbicides from traditional row crops to forestry management, plantation crops, lawn and garden care and more.

Licensing is a growing source of new products. G.D. Searle & Co. has one of the most aggressive licensing programs in the pharmaceutical industry, and many of our herbicide lines are being filled out with licensed products.

But most important for the future, fundamental research at Monsanto is generating whole new families of products. Recently, The NutraSweet Company introduced *Simplesse* natural fat substitute. When commercialized, it will go into new types of low-cholesterol and low-calorie but great-tasting products like ice cream, mayonnaise, spreads and dips. And our heavy investments in biotechnology research are already beginning to generate promising and unprecedented new pharmaceutical and agricultural products.

Exciting things are happening at Monsanto as we strive to better serve our stake holders. Read the next few pages and see what's new.

New Markets Today, New Worlds Tomorrow



by Nicholas L. Reding, President, Monsanto Agricultural Company

During 1987, Monsanto Agricultural Company strengthened its customer focus in response to changing markets. We now listen even better to our customers' needs.

During the agricultural revolution of the '60s and '70s, we became a world leader with a series of major proprietary products — *Ramrod, Machete, Avadex, Lasso* and *Roundup* herbicides.

Roundup, the world's leading herbicide, reached record sales in 1987. *Lasso*, which was reregistered last year by the U.S. Environmental Protection Agency, continued to be the premier herbicide in the United States. *Alimet* liquid animal-feed supplement also set sales records.

But conditions are changing. Although *Roundup* is growing rapidly, agricultural markets in general are growing less than 3 percent a year. Success today means we must know our customers even better.

Customer Focus Yields New Products
Nowhere has this customer focus had a greater impact than in the introduction of herbicides. For small grains and row crops, we introduced the following herbicides in 1987: *Landmaster* II, *Buckle, Ranger* and *Lariat* in the United States, *Sting* in France, *Rustler* and *Fortress* in Canada and *Tillmaster* in Australia.

For vine, tree and nut crops, new herbicides last year included *Azural* in France, *Squadron* in Australia and New Zealand and *Fuego* in Italy. *Latigo* herbicide in Central and South America and *Spark* herbicide in Thailand are used in plantation crops like bananas, rubber, palm oil and coffee.

For industrial and residential uses, we brought out several new herbicide brands: *Accord* and *Vision* for forestry management in the United States and Canada, *Trooper* for control of broadleaf weeds, and *Roundup* L&G and *Roundup* ready-to-use for residential markets.

For the near future, we have more promising candidates in our product-development pipeline than at any other time in the past 15 years. As a wealth of new herbicide and fungicide candidates work their way through the R&D system, a new commercial development organization shepherds them to the marketplace in the shortest possible time.

Biotech R&D Promises New Product Families
R&D must also look long term, and our investments in biotechnology promise whole new families of products.

Bovine somatotropin (BST) should be approved for sale in 1989, and porcine somatotropin (PST) should follow in a year or so. Both proteins occur naturally in the animals themselves and can be reproduced through biotechnology.

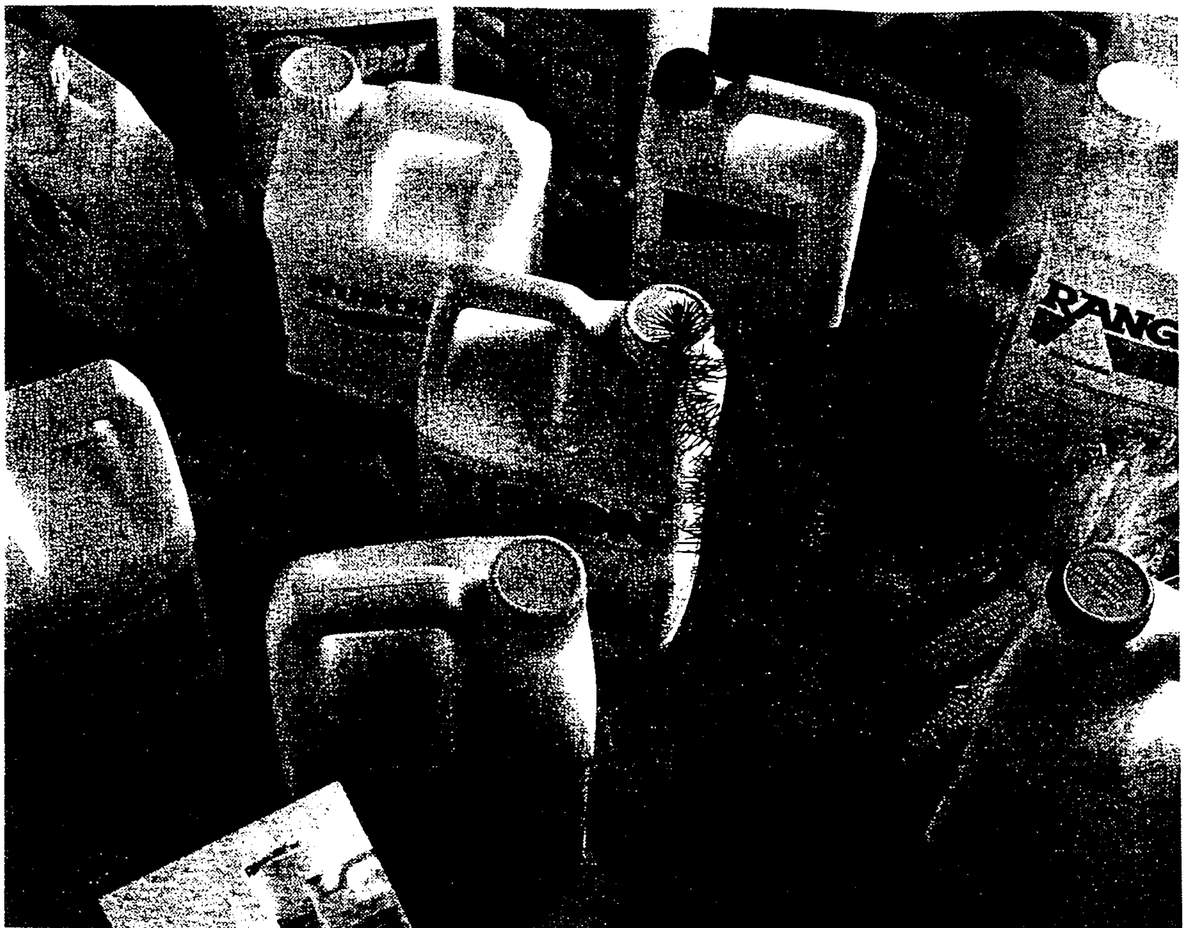
Supplementing a cow's normal supply of BST increases milk yield with proportionately less feed. Additional PST in hogs improves feed efficiency, increases growth rate and produces leaner pork.

We're also closer to commercializing genetically engineered plants. During 1987, we became the first company ever to carry a research field test of a genetically engineered food crop all the way to harvest. Monsanto researchers grew three types of tomato plants that had been given commercially beneficial new traits.

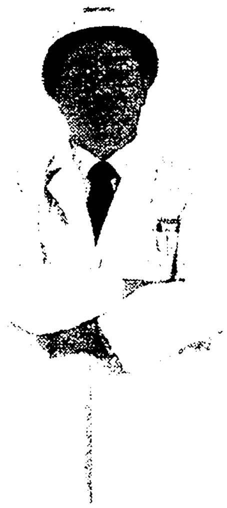
One group was made tolerant to *Roundup* herbicide, to make it possible to use that nonselective herbicide to kill weeds without damaging the tomato plants. Plants in the second group were engineered to produce a natural protein that is toxic to insects such as the tomato hornworm. In the third group, plants were given tolerance to a common viral disease, with a resulting increase in yield of more than 20 percent.

The same techniques could lead to other improved crops, such as oil-seed canola, vegetables, cotton and soybeans by the mid-1990s.

In agrichemicals, animal nutrition products and biotechnology research, Monsanto Agricultural Company intends to stay at the forefront of its industry.



Responding to different customer needs around the world, Monsanto Agricultural Company introduced some two dozen new herbicides during 1987.



"It is exciting to create new products for our international markets in Asia-Pacific. Spark, Squadron, Sting *and* Wallop *herbicides are the fruits of successful international research and cooperation with the business sector to fit market needs and grower expectations. I think the primary reason for their commercial success is a good balance of performance and quality versus cost."*

Tatsuo Sato, Ph.D.,
Formulation Research Supervisor,
Kawachi, Japan, Research Center,
Monsanto Agricultural Company

Monsanto Chemical Company Responds to Customer Needs

by Robert G. Potter, President, Monsanto Chemical Company

Since our inception in 1986, Monsanto Chemical Company has focused on delivering value to our customers. Our strategy and our success rest on meeting customers' needs worldwide. We do that by:

- developing new products that respond to the markets our customers serve,
- providing technical and marketing support to help our customers succeed, and
- adding value to regenerate the products that established our leadership in fibers, plastics, resins and chemicals.

New Centers Support Customers

An Applications Development Center for plastics was dedicated during 1987 in Springfield, Massachusetts. There we help customers optimize their designs and processing techniques.

A new Automotive Support Center in Detroit will open in 1988 to enlarge our major presence in the important automotive market.

New Products

One of our newest specialty plastics is *Lustran* Elite HH ABS resin, created specifically for applications requiring higher-heat performance for automotive manufacturers worldwide. Other identified needs are being met by development of additional high-performance *Triax* engineering thermoplastic alloys for autos as well as the power tool, appliance and business machine markets.

Resimene crosslinkers enhance the performance, appearance and application characteristics of paints and other industrial coatings. The latest innovative resins improve the high-solid coatings increasingly used in automotive finishes.

New Plants for *Santoprene* and Rubber Chemicals

Santoprene rubber and *Geolast* thermoplastic elastomer continue to grow in volume and the number of engineered applications they serve. A new plant in Japan encourages customers there to increase their use of *Santoprene,* which combines the performance of rubber with the processing ease of plastic.

As the world leader in rubber processing chemicals, we maintain close ties with global customer markets. A modern manufacturing plant is under construction in Brazil, and a joint venture has been established in South Korea. We are investing significant capital in our world-scale rubber chemical plants in the United States and Europe to improve quality and efficiency.

Growth Continues

A venerable, established product, *Saflex* plastic interlayer is still growing while celebrating its 50th anniversary in 1988. From longtime leadership in laminated windshields, *Saflex* has expanded rapidly in architectural and security glass. In 1987, it was installed to protect the U.S. Constitution on display in the National Archives.

The world's most advanced stain protection is a major value-added improvement to nylon carpet fiber, our biggest-volume product. Merchandising support also adds value, and *Wear-Dated* carpet with StainBlocker was featured during 1987 in its largest-ever television advertising campaign.

To build on our world leadership in maleic anhydride, capacity is being increased nearly 40 percent with projects in Pensacola, Florida, and Newport, Wales. Maleic is a widely used chemical building block that goes into fiberglass, farm chemicals and foods.

As the premier supplier of detergent materials, we have expanded capabilities in linear alkylbenzene, a key cleaning agent. Our expertise with phosphate compounds extends beyond detergents into higher-value products for food and industry. Working closely with our customers, we continue to develop new products to meet their needs.

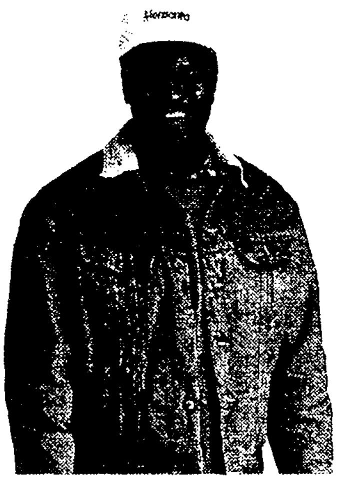
The world's leading airlines recognize the value of *Skydrol* fire-resistant hydraulic fluid and our support system for fluid sampling and analysis. Fluid analysis also adds value to *Therminol* heat-transfer fluid.

In all, Monsanto Chemical Company offers more than 1,000 products. Each represents a way to deliver performance for our customers' products. With performance, support and our commitment to be a Total Quality supplier, we hope to build a lasting partnership with each customer we serve.

DSW 021735

STLCOPCB4007044

By developing new products, strengthening technical and marketing support and renewing veteran products, Monsanto Chemical Company serves its customers well.



"We make linear alkylbenzene for laundry detergents. We use our new PROVOX control instrumentation, statistical process control, and the Total Quality improvement process — trying to make the best product for our customers all the time. We've visited our customers so we all know what they want. They want us to give them the best quality we can make. We're finding out what our system can do and helping improve it."

Frank Hamilton,
Process Operator,
Chocolate Bayou Plant,
Monsanto Chemical Company

GLOBAL PRODUCT, MARKETING INNOVATIONS AT SEARLE

by Sheldon G. Gilgore, M.D., Chairman, President and Chief Executive Officer, G.D. Searle & Co.

In 1988, G.D. Searle & Co. celebrates its 100th birthday.

During our first century, we have expanded our markets into 119 countries, with major business entities in more than 40. The United States and Canada account for about 40 percent of our revenues. The remaining 60 percent is divided among Europe, Asia and Latin America.

We enter our 100th year after an outstanding 1987, when we were able to increase sales by 23 percent. Supporting that strong gain was the highly successful introduction of *Calan SR*, the first once-a-day calcium-blocker drug for hypertension in the United States. Meanwhile, we continued a series of introductions of *Cytotec*, a drug for treatment of peptic ulcers, in many other countries.

We intend to accelerate this momentum in sales and product introductions through a three-part strategy: major investments in research, an intensified new licensing program and innovative marketing.

R&D Targets High-Growth Areas

Our internal research and development effort focuses on four high-growth areas: cardiovascular, immuno-inflammatory, gastrointestinal and central nervous system. Last year, we spent nearly $200 million on R&D, which is 24 percent of sales — one of the highest ratios in the pharmaceutical industry. Today, our capabilities for new discoveries are among the industry's most formidable, combining our own aggressive research with that of corporate Monsanto's biotechnology R&D program and that of our university and business R&D partners.

As a result, we now have more than a dozen new pharmaceutical candidates in clinical trials.

Vigorous Licensing Program Established

To expand our new-product effort further, we have vigorously stepped up our efforts to license compounds developed by others. To carry this out, we have created a clinical development operation dedicated exclusively to licensed products.

Staffed by highly experienced professionals, the organization is independent of internal R&D. As an independent licensing department, it is designed to move products through the evaluation and approval process very rapidly.

Furthermore, the department is international in reach. This allows us to call on medical directors around the world to develop unique intercountry strategies. For example, the work done in one country to obtain approval and introduction of a new drug can often be used to facilitate approvals in others.

Already, one licensed compound promises unusual effectiveness in fighting infections.

Innovative Marketing Is Basic to Success

Effective marketing is a requisite for success in the ethical pharmaceutical business. Searle's marketing expertise must be unsurpassed in the 20 countries that account for about 90 percent of the overall pharmaceutical market.

Thus, in 1988 we will be strengthening our marketing operations worldwide, especially in Italy, West Germany and Japan — countries where the company is building the critical mass necessary for success.

At the same time, we will continue to reinforce these marketing efforts through some innovative, socially responsible initiatives. An example is the *Calan For Patients in Need* program, which we launched in February 1987. This program makes available $10 million worth of *Calan SR* to the indigent. The program not only has won high marks for corporate social responsibility but also has made a positive impact in the marketplace.

The *Calan For Patients in Need* program was followed in September by the *Searle Patient Promise* program. In this initiative, Searle will refund the full purchase price of the most recent prescription of any Searle product that fails to achieve the desired therapeutic outcome.

Searle will continue these and other societal programs because they embody our twin commitments: to develop lifesaving and life-enhancing new products and to become a visible, tangible and human part of local communities around the world. In short, in Searle's second century, we intend not only to realize a significant return on our research investment but also to demonstrate what a pharmaceutical company can and should be.

Lifesaving and life-enhancing pharmaceuticals reach people around the world as a result of Searle's major commitment to research, licensing programs and innovative marketing.

"Our drug development concentrates on providing advantages in therapy, quality of life and cost effectiveness. An example is depression treatment that minimizes both sedative effects and interference with cognitive processes. Another is memory improvement for patients with Alzheimer's disease. By focusing on patients and their needs, we're confident Searle will provide a steady flow of unique and important new products."

Barbara Kriegsmann,
Senior Director,
Corporate Strategic Planning,
G.D. Searle & Co.

DSW 021738

STLCOPCB4007047

Fisher Moves Toward Plant of the '90s

by Robert E. Flynn, Chairman and Chief Executive Officer, Fisher Controls International, Inc.

Product and strategy development at Fisher Controls is focused on a vision of the advanced manufacturing plant of the 1990s. During 1987, we moved closer to that goal through further development and testing of Computer-Integrated Manufacturing (CIM) technology.

PROVOX Makes CIM Possible

Integrated with business information systems, *PROVOX* process controls bring all elements of a plant into one system. CIM operators in a central control room get a comprehensive view of the entire plant. Benefits are improved communication with customers and suppliers, more efficient management of plant operations, higher product quality due to more precise control of processes, and reduced costs from optimal use of resources.

CIM Proven in Monsanto Plants

During 1987, we installed CIM technology with *PROVOX* controls in five major Monsanto plants. The plants benefit from the sophisticated and efficient control systems, and we are able to use them as operating demonstrations to show potential customers.

By combining CIM with human-resource innovations and an emphasis on total quality, our "Plant of the '90s" concept has resulted in as much as a 50 percent improvement in productivity.

UNIVOX Control Centers Introduced

Also in 1987, we introduced the *UNIVOX* control center. A compact, stand-alone unit that can be mounted right on the factory floor, *UNIVOX* offers the same precise and reliable control as *PROVOX*, with which it is compatible. Offering improved price/performance for smaller systems, *UNIVOX* should open new markets in batch and continuous processing.

We also acquired EXAC Corporation of California, a leading manufacturer of flowmeters for handling difficult fluids.

Among new *PROVOX* products introduced in 1987 was the Configuration Mate software package to help users cut engineering time and increase project profitability.

In addition we introduced several new highly sophisticated rotary control valves and accessory products into key processing industries.

In the first full year of commercialization of *Prism* Alpha nitrogen systems, sales exceeded expectations. Developed by Fisher subsidiary Permea Inc., this technology for separating nitrogen from air was rapidly accepted as the most advanced available.

NutraSweet Expands Markets, Announces New Products

by Robert B. Shapiro, Chairman and Chief Executive Officer, The NutraSweet Company

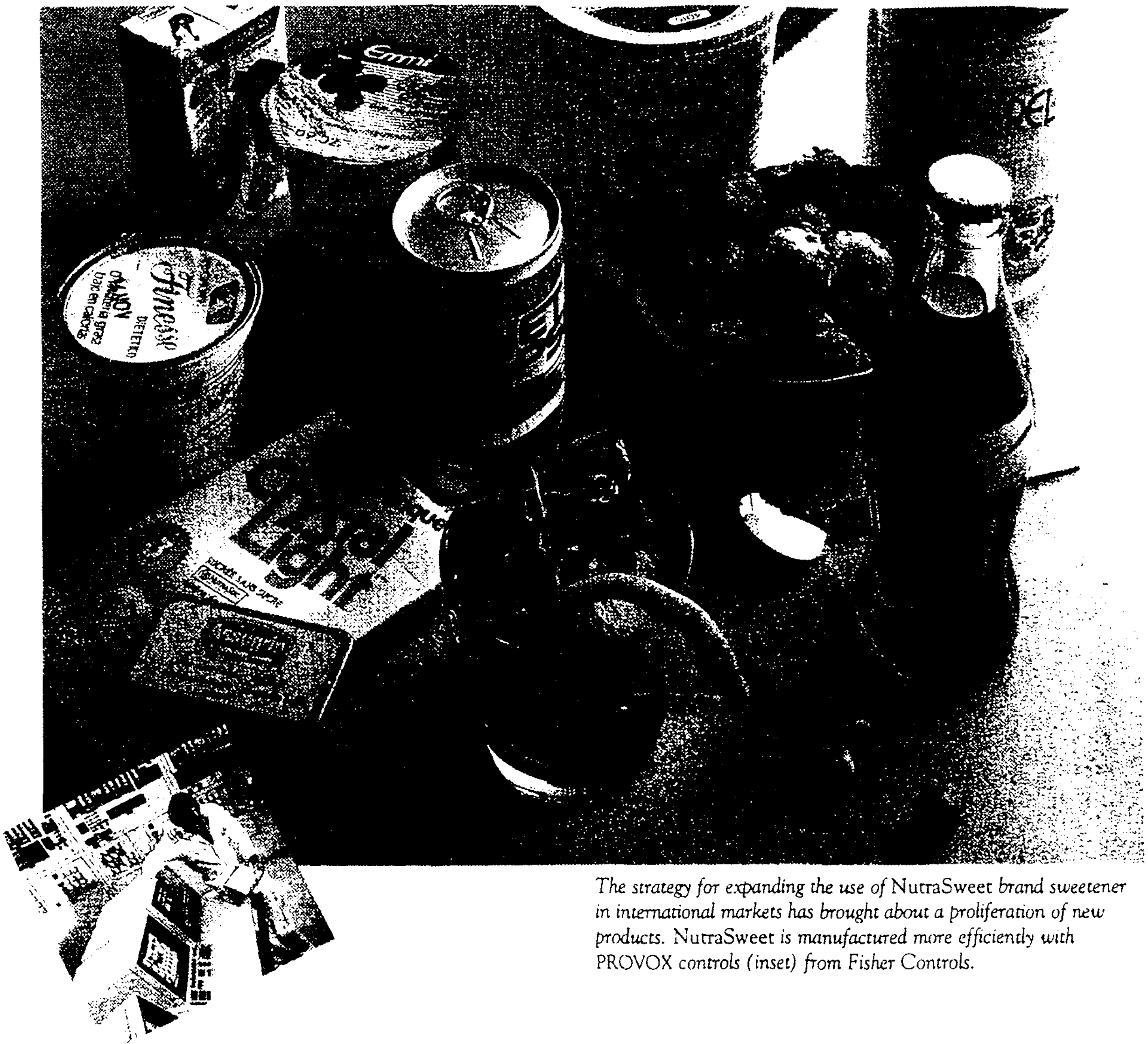
Well over 100 million people around the world regularly enjoy *NutraSweet* brand sweetener in more than 1,200 products. Over 300 of these products were introduced in 1987, reflecting continued growth in consumer demand.

To support future growth, we are following three strategies: first, increasing the use of *NutraSweet* in established markets; second, developing new applications for *NutraSweet* sweetener; and third, creating new food products.

Sweetener Grows in Established Markets

The first strategy was especially successful in 1987. Products sweetened with 100 percent *NutraSweet* brand sweetener are rapidly becoming the worldwide standard of taste in sugar-free foods and beverages.

In our largest end-use market, carbonated soft drinks, consumption of products sweetened with 100 percent *NutraSweet* grew by 16 percent in the United States. The adoption of 100 percent *NutraSweet* formulations was even more rapid abroad, with major launches of Diet Pepsi in



The strategy for expanding the use of NutraSweet *brand sweetener in international markets has brought about a proliferation of new products.* NutraSweet *is manufactured more efficiently with* PROVOX *controls (inset) from* Fisher Controls.

"The overall mission of The NutraSweet *Company is to bring better food choices to consumers. Today, we are accomplishing that mission by working together with our NutraSweet customers. Our job in sales is to help our customers identify new opportunities in meeting consumer needs, and then to rally the vast resources within NutraSweet to bring those products to market."*

Katie Jannotta,
Area Sales Manager,
The NutraSweet Company

the United Kingdom and Diet Coke and Diet Sprite in Australia.

We will soon expand into another large country market. In December 1987, the French government overturned an 86-year-old prohibition on the use of intense sweeteners in foods and beverages, opening this important market for *NutraSweet*.

Sweetener Finds New Applications

Pursuing the second strategy, new applications for *NutraSweet* brand sweetener, scientists at our new R&D facility in Mt. Prospect, Illinois, continued to make progress. One important technological development was the encapsulation of *NutraSweet* to allow its use in baking. A petition for this use was filed with the U.S. Food and Drug Administration (FDA) late in the year.

Currently there are 14 applications for new uses of aspartame, the generic name for *NutraSweet*, in various stages of review by the FDA, representing new possibilities for the future.

Research Yields Fat Substitute

We also reached a milestone for our third strategy. In January 1988, we announced *Simplesse* all-natural fat substitute. Consisting of microparticulated protein from foods such as fresh eggs and milk, *Simplesse* will dramatically reduce calories and cholesterol in different types of products such as ice cream, cheese spreads and mayonnaise.

The NutraSweet Company will be filing a petition with the FDA to affirm the GRAS, or "generally recognized as safe," status of products made with *Simplesse*.

Electronics Unit Rated Tops by Customers

by James E. Springgate, President, Monsanto Electronic Materials Company

During 1987, we at Monsanto Electronic Materials Company (MEMC) reached a simple but tough goal: attaining top ranking by major customers for product quality and service.

We achieved this by taking several important steps. We implemented a worldwide product quality improvement system, broadened the use of statistical process control and instituted a just-in-time delivery program for our products.

As a result of these and other efforts, customers now list MEMC at the top of their rankings for vendor product quality and service. Our strengthened revenues in 1987 were due in large part to increased orders from customers with whom we had demonstrated superior quality and service.

Fast-changing semiconductor industry technology requires that silicon meet very precise product specifications. These specs get tighter every year, while service demands also increase. MEMC has devoted years to assembling a good mix of people, programs and equipment to meet customer needs and to surpass the performance of our competitors.

Research Strategy Ensures Flow of New Products

by Howard A. Schneiderman, Ph.D., Senior Vice President, Research and Development

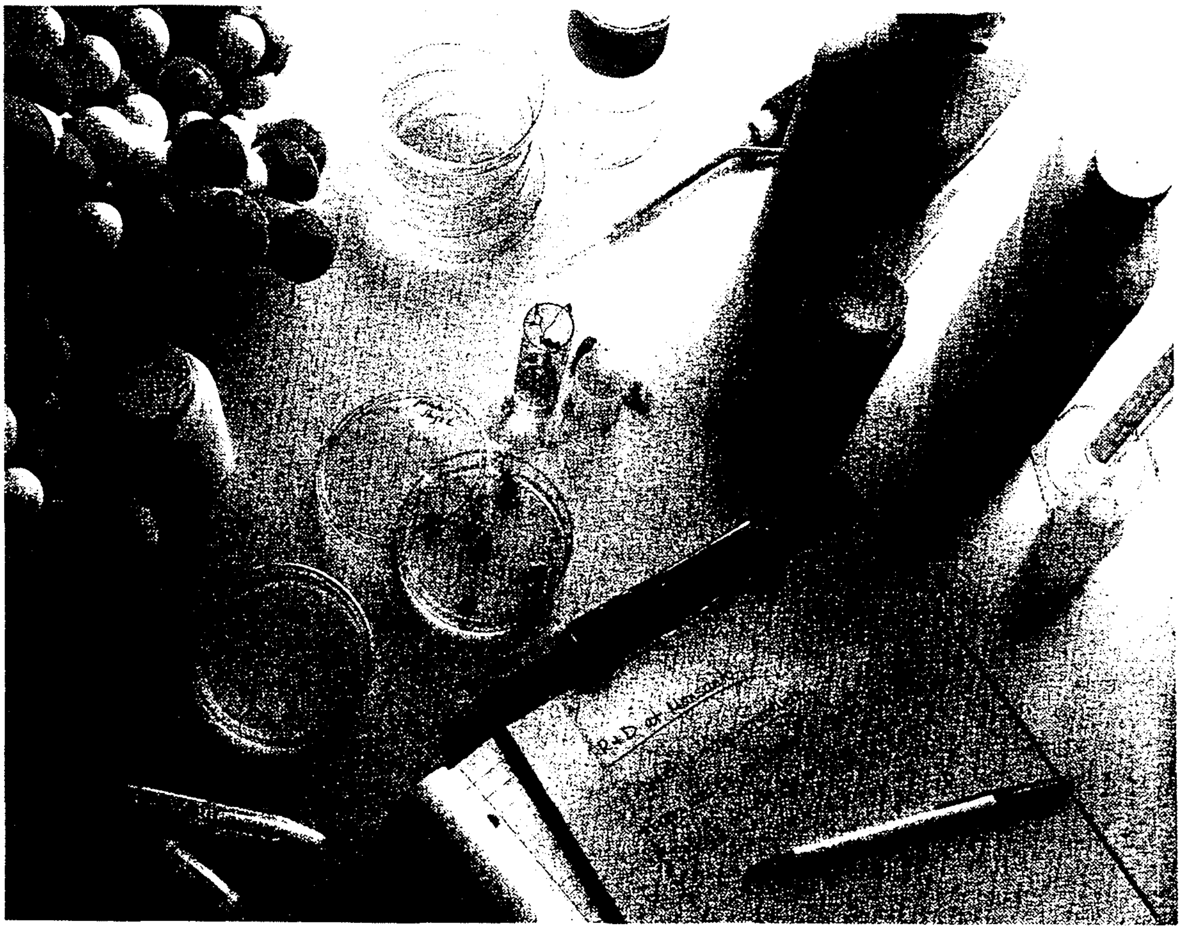
We made extraordinary strides in 1987 in discovering and developing new product and process opportunities in many areas of the Company's interests. These ranged from fundamental studies in biotechnology, to the introduction of new herbicides that make obsolete many traditional products, to the development of new and unexpected uses for existing chemical products.

We challenged our scientists and engineers to integrate outstanding science with a deep understanding of the Company's business strategy. They have met this challenge, as we manage Monsanto technology for commercial success.

What principles guide research at Monsanto?

Some R&D Short-Term, Some Long-Term

First, we are pursuing a productive mix of short-, medium- and long-term projects that match each operating company's objectives. While Monsanto Chemical Company and The NutraSweet Company focus on a time frame of five years or less, G.D. Searle & Co. and Monsanto Agricultural Company focus on the next decade. Corporate Research and Development, which includes



Monsanto has increased R&D spending and tightened its R&D focus. The goal is more new products in less time.

"We are committed to assisting Monsanto scientists and engineers in producing the finest products whose manufacture and use have a minimal impact on the environment, while also providing a significant benefit to our customers. As an example, we worked with our diphenyl oxide group to identify and reduce trace impurities in that product so that today we make the highest quality material on the market."

Fred Hileman, Ph.D.,
Monsanto Fellow, Safety and Environmental Health,
Monsanto Environmental Sciences Center

DSW 021742

STLCOPCB4007051

Biotechnology Product Discovery, emphasizes both urgent near- and medium-term products and processes and those that may be 10 or more years distant.

■ Broad Product Families Are Goal of R&D

Second, we are committed to fundamental research that can lead to wholly new product opportunities. Biotechnology is an example. In only a few years, Monsanto scientists have progressed from basic studies in genetics and molecular biology to the commercial development of whole families of new proprietary products. Fifteen new product candidates, including drugs, animal protein stimulants and genetically engineered crops, are targeted for commercialization in 1989 and beyond.

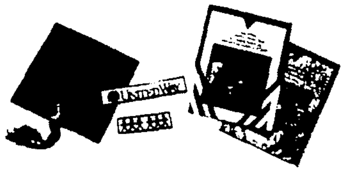
Getting in on the ground floor with a powerful discovery team secured for Monsanto both leadtime and patents. These opportunities would have been lost without the creation of new knowledge in our laboratories.

■ University Collaborations Give Monsanto an Edge

Third, we have become a leader in effective collaboration with great research universities. Access to the enormous scientific talent of research universities throughout the world continues to help give Monsanto a competitive edge in fields with great commercial potential.

Monsanto has successfully incorporated these principles into the Company's research strategy, a strategy that helps ensure a continuous flow of new, socially significant and profitable proprietary products today and in the future.

INVESTING IN OUR COMMUNITIES AND THE ENVIRONMENT



by Harold J. Corbett, Senior Vice President, Environment, Safety and Health

In environmental policy and community relations, Monsanto has long been an outspoken leader. This leadership is essential; without it, we will ultimately forfeit our right to do business.

■ Monsanto Fund Strategy Refined

In 1987, we further refined the strategy of Monsanto Fund. We now focus the Fund's dollars on areas where we can be a catalyst for change and directly help the Company and its communities.

For example, our Port Plastics plant in Addyston, Ohio, has undertaken an innovative "Partnership in Education" program with local schools, gaining public recognition for its efforts in promoting business/education relationships.

This strategy is mirrored in programs of operating units. Monsanto Agricultural Company, for example, has sponsored a scholarship program for young wheat growers, enabling them to attend national wheat association meetings and participate in policy debates and training seminars. This program has gained a widespread reputation in wheatgrower communities.

■ Environmental Focus Shifts

We also shifted the focus of our leadership in environmental issues in 1987 as a result of federal legislation enacted in 1986. The Superfund Amendments and Reauthorization Act passed by the U.S. Congress began to be implemented last year. One part of the law, commonly called Title III, requires companies to report large amounts of information on hundreds of hazardous materials. These data will include how much of these materials is stored at each plant site and how much is emitted.

Monsanto long ago took the lead in supplying much of this information, but some of the Title III requirements are new even for us. Therein lies both a test of our leadership and a significant opportunity.

The test: There could be confusion and strong public reaction if this information lacks a proper perspective. To help provide that perspective, we have already undertaken local community meetings, special communications efforts and reviews of plant operations with key local officials. We are also fully participating in local emergency planning committees.

And in these efforts lies the opportunity: to use Title III to forge even stronger partnerships with our plant communities and our customers.

DSW 021743

STLCOPCB4007052

FINANCIAL SECTION CONTENTS

Unless otherwise indicated by the context, "Monsanto" means Monsanto Company and consolidated subsidiaries, and "the Company" means Monsanto Company only. All dollars are in millions, except per share data.

MANAGEMENT REPORT

Monsanto Company management is responsible for the fair presentation and consistency of all financial data included in this Annual Report. Where necessary, the data reflect management's best estimates and judgments.

Management also is responsible for maintaining a system of internal accounting controls with the objectives of providing reasonable assurance that Monsanto's assets are safeguarded against material loss from unauthorized use or disposition and that authorized transactions are properly recorded to permit the preparation of accurate financial data. Cost-benefit judgments are an important consideration in this regard. The effectiveness of internal controls is maintained by: (1) personnel selection and training; (2) division of responsibilities; (3) establishment and communication of policies; and (4) ongoing internal review programs and audits. Management believes that Monsanto's system of internal controls is effective and adequate to accomplish the above described objectives.

Richard J. Mahoney
Chairman and
Chief Executive Officer

Francis A. Stroble
Senior Vice President and
Chief Financial Officer

February 26, 1988

DSW 021745

STLCOPCB4007054

AUDIT COMMITTEE REPORT

The Audit Committee is composed of five non-employee members of the Board of Directors and met four times in 1987. It reviews and monitors the Company's internal controls, financial reports, accounting practices and the scope and effectiveness of the audits performed by the independent auditors and internal auditors. The Committee also recommends to the full Board of Directors the appointment of the Company's principal independent auditors and approves in advance all audit and non-audit services provided by such auditors. As ratified by shareowner vote at the 1987 Annual Meeting, Deloitte Haskins & Sells was appointed as independent auditors to examine, and express an opinion as to the fair presentation of, the consolidated financial statements. This opinion appears below.

The Audit Committee discusses audit and financial reporting matters with representatives of the Company's financial management, its internal auditors and Deloitte Haskins & Sells. The internal auditors and Deloitte Haskins & Sells meet with the Committee, with or without management representatives present, to discuss the results of their examinations, the adequacy of Monsanto's internal accounting controls and the quality of financial reporting. The Committee encourages the internal auditors and Deloitte Haskins & Sells to communicate directly with the Committee.

The Audit Committee has reviewed and approved the financial section of this Annual Report. Pursuant to the recommendation of the Audit Committee, the Board of Directors has also approved the financial section.

Jean Mayer, Ph.D., D.Sc.
Chairman, Audit Committee

February 26, 1988

INDEPENDENT AUDITORS' OPINION

To the Shareowners of Monsanto Company:

We have examined the statement of consolidated financial position of Monsanto Company and Subsidiaries as of December 31, 1987 and 1986, and the related statements of consolidated income, shareowners' equity and cash flow for each of the three years in the period ended December 31, 1987. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, such consolidated financial statements present fairly the financial position of Monsanto Company and Subsidiaries at December 31, 1987 and 1986, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1987, in conformity with generally accepted accounting principles. These principles were consistently applied during the period except for the change, with which we concur, in 1986 in the method of determining pension expense as described in the Pension Benefits note to the financial statements.

Deloitte Haskins & Sells

Deloitte Haskins & Sells
Saint Louis, Missouri

February 26, 1988

STATEMENT OF CONSOLIDATED INCOME

(Dollars in millions, except per share)	1987	1986	1985
Net Sales	**$7,639**	$6,879	$6,747
Cost of goods sold	**4,755**	4,344	4,841
Gross Profit	**2,884**	2,535	1,906
Marketing and administrative expenses	**1,342**	1,244	919
Technological expenses	**615**	596	548
Amortization of intangible assets	**225**	218	88
Restructuring expense (income) — net	**(32)**	(158)	949
Operating Income (Loss)	**734**	635	(598)
Interest expense	**(172)**	(201)	(178)
Interest income	**42**	41	63
Gain from sale of oil and gas operations			392
Other income — net	**69**	161	23
Income (Loss) Before Income Taxes and Extraordinary Gain	**673**	636	(298)
Income taxes	**237**	203	(170)
Income (Loss) Before Extraordinary Gain	**436**	433	(128)
Extraordinary gain from debt repayment			30
Net Income (Loss)	**$ 436**	$ 433	$ (98)
Earnings per Share:			
Before extraordinary gain	**$ 5.63**	$ 5.55	$(1.67)
Extraordinary gain			0.40
After extraordinary gain	**$ 5.63**	$ 5.55	$(1.27)

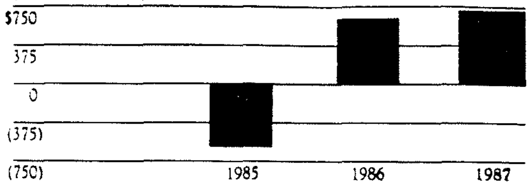
The above statement should be read in conjunction with pages 35 through 40 of this report.

Key Financial Statistics

	1987	1986	1985
As a Percent of Net Sales:			
Gross Profit	**38%**	37%	28%
Marketing and Administrative Expenses	**18**	18	14
Research and Development Expenses	**7**	8	7
Operating Income (Loss)	**10**	9	(9)
Net Income (Loss)	**6**	6	(1)
Effective Income Tax Rate	**35**	32	(57)
Return on Average Shareowners' Equity	**11**	12	(3)

DSW 021747

Operating Income (Loss)
(dollars in millions)



■ **Operating Income Reaches Record Level**
Monsanto achieved record operating income in 1987, due to successful marketing strategies, aggressive cost-reduction actions taken in prior years and the weaker U.S. dollar. Operating income increased 16 percent to $734 million in 1987 from $635 million in 1986. Net income was $436 million compared with $433 million in 1986. Earnings per share for 1987 were $5.63 versus 1986 earnings per share of $5.55. Included in 1986 net income, however, was $85 million of net gains associated with unusual items resulting from the sale, closure, or impairment of facilities and businesses as well as other unusual income and expenses. Included in 1987 was an $18 million gain from unusual items. Excluding the 1986 and 1987 unusual items, net income in 1987 increased 20 percent.

■ **Monsanto Benefits From Successful Marketing Strategies, Cost-Reduction Actions and the Weaker U.S. Dollar**
The Agricultural Products business had solid gains in 1987 sales and operating income, led by outstanding worldwide sales growth of *Roundup* herbicide. Additionally, *Alimet* animal feed supplement had a record year.

The Chemicals business maintained a strong financial performance despite significantly higher costs for raw materials compared with 1986, demonstrating the effect of a strong portfolio of higher value-added products and strong demand outside the United States.

The NutraSweet Company had strong growth in unit sales and consumer usage in 1987. Revenues were up only slightly from the prior year due to lower international prices and inventory adjustment by some of its major customers.

Pharmaceuticals registered a sales increase of 23 percent in 1987, reflecting the successful introduction of *Calan SR*, a sustained release calcium channel blocker for the treatment of hypertension. Sales of the family of *Calan* products were more than $130 million in 1987. Operating losses in 1987 were unchanged from the 1986 level. The profitability generated by increased sales was offset by higher marketing expenses associated with the launch of *Calan SR* and other products, coupled with continued planned investments in research for the future.

Fisher Controls demonstrated a remarkable turnaround in 1987 in the face of continued weakness in its end-use markets. Higher sales, along with cost reductions made in late 1986, allowed Fisher Controls to produce operating income of $26 million in 1987 compared with a $66 million loss in 1986.

The Electronic Materials business remained weak in 1987. However, that business was close to break-even during most of the year — a significant improvement from the large operating loss in 1986.

■ **Sales Increase Largest Since 1979**
Sales were $7,639 million in 1987, an 11 percent increase over 1986 — the largest annual increase since 1979. Sales over the past several years have been relatively level, as Monsanto divested itself of many large-volume but historically low-return businesses.

Worldwide sales volume in 1987 increased 8 percent. Worldwide selling prices increased 3 percent, due primarily to the effect of ex-U.S. currency translation. United States export sales to third party customers were $887 million in 1987, a 25 percent increase over 1986. This export sales increase was due in part to the increased competitiveness of United States produced products in ex-U.S. markets resulting from the weaker U.S. dollar.

The gross profit margin increased to 38 percent in 1987 versus 37 percent in the prior year. Excluding the Electronic Materials asset impairment write-down in 1986, however, gross profit margins would have been level year-to-year. This was due to increased sales of products with higher margins (Pharmaceuticals and Crop Chemicals), offset by lower Chemicals margins resulting from a selling price/raw material cost squeeze. Overall, Monsanto's raw material costs increased approximately 13 percent during 1987.

Marketing and administrative expenses increased 8 percent in 1987, due mainly to the effect of translating stronger ex-U.S. currencies into weaker U.S. dollars. Excluding the currency translation impact, marketing and administrative expenses increased 3 percent in 1987.

Technological expenses rose 3 percent in 1987. Research and development expenses, a component of technological expenses, were 7 percent higher in 1987, as Monsanto's commitment to research and development of new products continued. Approximately two-thirds of the current R&D effort is directed toward the life sciences — pharmaceuticals and agriculture. The higher 1987 sales level resulted in R&D being 7 percent of sales in 1987 versus 8 percent in 1986.

DSW 021748

STLCOPCB4007057

Operating income improved 16 percent in 1987. Operating income in 1987 included $32 million of restructuring income as divestment actions proceeded better than originally expected. Operating income in 1986 included $158 million of restructuring income, principally from the sale of certain product lines associated with the Texas City, Texas, petrochemicals plant, which was targeted for divestiture under the 1985 restructuring program. Operating income in 1986 was also affected by the $90 million Electronic Materials asset impairment write-down.

Interest expense declined in 1987 due to lower average interest rates and lower monthly average debt outstanding. In addition to the unusual gains included in 1986 operating income, there were $88 million of gains included in other income in 1986 from the sale of product lines, principally acetic acid.

The effective income tax rate in 1987 was 35 percent, as compared with 32 percent in 1986. The higher 1987 effective tax rate was due primarily to the tax law changes that eliminated investment tax credits in the United States and lower capital gains benefits in 1987, partially offset by lower statutory rates.

Return on average shareowners' equity was 11 percent in 1987, as compared with 12 percent in 1986. However, 1986 included unusual net gains, principally the gain from the sale of the Texas City plant ($114 million after tax, or $1.46 per share), partially offset by the loss from the Electronic Materials asset impairment ($46 million after tax, or $0.59 per share). Excluding the unusual items in both years, return on average shareowners' equity in 1987 was 11 percent, versus 10 percent in 1986.

The impact of prior years' inflation is not completely reflected in historical cost financial statements because the cost of an asset today (current cost) is generally higher than its original (historical) cost. As a result, historical cost depreciation expense included in the income statement is lower than depreciation expense using the current cost approach. For Monsanto, the use of current cost depreciation in 1987 instead of the historical cost depreciation expense would have reduced net income approximately $70 million.

Net sales increased to $6,879 million in 1986, a 2 percent increase over 1985. However, the comparison of sales is affected by the inclusion in 1985 of net sales of products ($931 million) that were subsequently divested as part of the restructuring program. Also, the acquired Searle and NutraSweet businesses were included for only the last five months of 1985, versus a full twelve months in 1986. On a comparable basis, sales volume increased 3 percent in 1986. Worldwide selling prices increased 1 percent, attributable largely to the impact of ex-U.S. currency translation.

The gross profit margin improved significantly in 1986 due to the full-year effect of the higher margins associated with the Searle and NutraSweet products, lower raw material costs and the subsequent cost benefits resulting from the 1985 restructuring program. The gross profit margin was adversely affected in 1986 by the $90 million obsolescence charge for the Electronic Materials property write-down.

Net income in 1986 was also affected by higher marketing and administrative expenses resulting from the full-year inclusion of Searle's and NutraSweet's heavier marketing expenses, increased amortization of intangible assets relating to the acquired Searle and NutraSweet businesses, the effect of the restructuring program on 1986 income and increased interest expense resulting from increased debt. Net income in 1985 included a gain on the sale of Monsanto's oil and gas operations, amounting to $201 million after tax, or $2.61 per share.

■ Analysis of Change in Earnings per Share — Better (Worse)

	1987 vs. 1986	1986 vs. 1985
Sales Related Factors:		
Selling prices	$ 1.21	$ 0.28
Sales volume and mix	2.12	0.69
Total Sales Related Factors	3.33	0.97
Cost Related Factors:		
Raw material costs	(1.70)	1.28
Other manufacturing costs	(0.07)	0.09
Marketing, administrative and technological expenses	(0.93)	(0.49)
Nonrecurring costs (including Electronic Materials property write-down)	0.98	(0.98)
Total Cost Related Factors	(1.72)	(0.10)
Other Factors:		
Restructuring — net	(1.01)	8.29
Acquisitions		0.44
Divestitures	(0.13)	(0.48)
Total Other Factors	(1.14)	8.25
Operating Income	0.47	9.12
Interest expense	0.19	(0.14)
Interest income	0.01	(0.15)
Gain from sale of oil and gas operations		(2.61)
Other income — net	(0.87)	0.92
Change in income taxes	0.25	0.15
Change in shares outstanding	0.03	(0.07)
Income Before Extraordinary Gain	0.08	7.22
Extraordinary gain		(0.40)
Change in Earnings per Share	$ 0.08	$ 6.82

DSW 021749

STLCOPCB4007058

Operating Unit Segment Data

	Net Sales			Operating Income (Loss)			Research and Development		
	1987	1986	1985	**1987**	1986	1985	**1987**	1986	1985
Agricultural Products:									
Crop Chemicals	**$1,178**	$1,067	$1,073	**$ 359**	$ 318	$ 177	**$ 94**	$ 94	$110
Animal Sciences	**127**	86	79	**(43)**	(35)	(92)	**47**	41	32
Chemicals	**3,858**	3,548	4,051	**450**	613	(480)	**108**	105	128
Electronic Materials	**185**	154	137	**(5)**	(139)	(84)	**8**	15	16
Fisher Controls	**749**	645	652	**26**	(66)	34	**18**	21	20
NutraSweet	**722**	711	317	**145**	142	58	**31**	25	11
Pharmaceuticals	**820**	665	262	**(119)**	(119)	(139)	**199**	177	96
Oil and Gas			172			16			
Biotechnology Product Discovery				**(43)**	(41)	(31)	**43**	39	31
Corporate		3	4	**(36)**	(38)	(57)	**9***	6*	26*
Total consolidated	**$7,639**	$6,879	$6,747	**$ 734**	$ 635	$(598)	**$557**	$523	$470

Corporate R&D expenses are allocated on a weighted average basis of investment to operating units in determining operating income (loss).

	Total Assets			Capital Expenditures			Depreciation and Amortization		
	1987	1986	1985	**1987**	1986	1985	**1987**	1986	1985
Agricultural Products:									
Crop Chemicals	**$ 918**	$ 939	$1,061	**$ 71**	$ 55	$ 84	**$ 82**	$ 84	$ 89
Animal Sciences	**221**	217	174	**21**	33	31	**22**	21	21
Chemicals	**2,856**	2,704	2,982	**287**	244	291	**231**	236	248
Electronic Materials	**234**	228	302	**11**	51	55	**17**	122	37
Fisher Controls	**654**	612	636	**22**	38	53	**34**	36	28
NutraSweet	**1,724**	1,883	1,862	**31**	39	4	**206**	205	73
Pharmaceuticals	**1,484**	1,394	1,438	**50**	53	33	**75**	67	39
Oil and Gas						85			59
Biotechnology Product Discovery	**78**	50	33	**6**	6	3	**8**	7	2
Corporate	**286**	242	389	**6**	1	6	**4**	2	3
Total consolidated	**$8,455**	$8,269	$8,877	**$ 505**	$ 520	$ 645	**$679**	$780	$599

The above data should be read in conjunction with the Segment Information note to the financial statements on page 40.

Operating income has been affected by the 1985 restructuring program and the 1986 Electronic Materials asset impairment costs, the effects of which were:

	Income (Expense)		
	1987	1986	1985
Agricultural Products:			
Crop Chemicals	**$ –**	$ (4)	$(121)
Animal Sciences	**3**	8	(37)
Chemicals	**30**	149	(714)
Electronic Materials	**1**	(89)	(17)
Fisher Controls			(2)
Pharmaceuticals			(55)
Corporate	**(2)**	4	(3)
Increase (decrease) in operating income	**$32**	$ 68	$(949)

Net Sales
(1987, percent of total)

DSW 021750

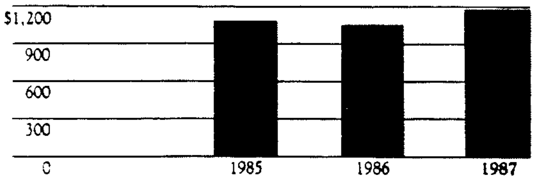
STLCOPCB4007059

■ Crop Chemicals

Net Sales	1987	1986	1985
Herbicides and other agricultural chemicals	**$1,178**	$1,067	$1,073

The Crop Chemicals operating unit is a leading worldwide producer and marketer of agricultural herbicides, including *Roundup*, *Lasso*, *Avadex* and *Machete* herbicides. More than half of Crop Chemicals sales came from ex-U.S. markets in 1987.

Crop Chemicals Net Sales
(dollars in millions)



Innovative marketing programs helped Crop Chemicals post healthy 1987 increases in sales, up 10 percent, and operating income, up 13 percent. Sales volume of *Roundup* herbicide increased significantly worldwide, as use of that herbicide to control perennial and annual weeds continued to expand. This growth was stimulated in part by reduced prices under a marketing strategy, begun in 1985, which opened up new markets. Approximately two-thirds of *Roundup* herbicide sales are in ex-U.S. markets. Sales volume of *Avadex* herbicide also increased significantly, sparked by heavy demand in North America and a large sale to the Soviet Union. The positive effects of translating ex-U.S. operations into U.S. dollars also benefited Crop Chemicals sales and operating income.

Sales and operating income of *Lasso* herbicide, sold primarily in the United States to control grassy weeds in corn and soybean crops, were lower in 1987. Lower planted corn acreage, erosion of market share and increased competitive pressure on selling prices were key factors. In December 1987, the United States patent for alachlor, the active ingredient of *Lasso* herbicide, expired. Innovative marketing programs and continuing enhancements of the product and its method of application are expected to maintain the position of *Lasso* herbicide as a leader in the agricultural chemicals market.

In 1987, the United States Environmental Protection Agency (EPA) concluded the Special Review of the benefits and potential risks of alachlor. The EPA decision allows continued use of alachlor under certain conditions. *Lasso* herbicide will be classified "restricted use," which means its use is restricted to certified applicators, or persons under their supervision. The majority of current users of *Lasso* herbicide are already certified. Monsanto's tests confirm that *Lasso* herbicide poses no unreasonable adverse effects to humans or the environment when used according to the label.

Crop Chemicals research programs are primarily directed at discovery and development of pesticides and genetically engineered plants (that are resistant to viruses, insects and herbicides), as well as continuing research on new herbicides.

In 1986, the Crop Chemicals business overcame an extremely weak United States agricultural environment and posted a solid performance. Net sales were at virtually the same level in 1986 as compared with 1985, and operating income increased as sales volume growth of *Roundup* herbicide more than offset declining sales volume of *Lasso* herbicide. Operating income in 1985 was reduced by $121 million of restructuring expense. Research and development expenses declined in 1986 as a result of the refocusing of research efforts under the 1985 restructuring program.

■ Animal Sciences

Net Sales	1987	1986	1985
Animal products	**$127**	$86	$79

The Animal Sciences business focuses on animal nutrition and growth products, including *Alimet* animal feed supplement and bovine somatotropin (BST), a naturally occurring protein produced through biotechnology, that research demonstrates enhances the efficiency of milk production. Monsanto also is developing a porcine somatotropin that research demonstrates improves the feed efficiency and growth rate of hogs and results in leaner pork.

A 34 percent increase in sales volume of *Alimet* animal feed supplement, coupled with more favorable pricing, led to a 48 percent increase in sales for the Animal Sciences business. The operating loss for 1987 was about the same as in 1986, after excluding the restructuring income. The increase in 1987 research and development expenses, coupled with BST manufacturing start-up costs, offset the effect of the higher profits resulting from the increased sales of *Alimet* animal feed supplement.

In 1987, the United States Department of Agriculture completed its economic impact study on BST with results favorable to commercialization. A manufacturing facility in Europe began production in late 1987.

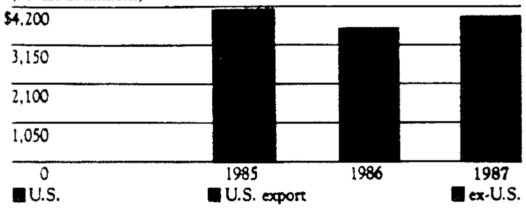
Sales for 1986 increased 9 percent over 1985, as sales volume of *Alimet* animal feed supplement increased significantly. The year-to-year comparison is affected by sales of discontinued products, which were included in 1985 results. The operating loss in 1986 was lower than 1985 due to increased sales of *Alimet* animal feed supplement in 1986 and the effect of the 1985 restructuring program.

■ Chemicals

Net Sales	1987	1986	1985
Detergents and phosphates	**$ 494**	$ 536	$ 550
Engineered products	**200**	205	251
Man-made fibers	**950**	856	1,080
Plastics	**804**	639	804
Resin products	**645**	584	637
Rubber chemicals and instruments	**366**	319	283
Specialty chemicals	**399**	409	446
Total	**$3,858**	$3,548	$4,051

Monsanto's worldwide Chemicals unit produces a wide range of chemicals, plastics, fibers and other products listed in the table above. The Chemicals unit's principal strengths are nylon carpet fiber, high-performance plastics, *Saflex* plastic interlayer, detergents and phosphates, rubber chemicals and instruments, and maleic anhydride.

Chemicals Net Sales (U.S., U.S. export and ex-U.S.)
(dollars in millions)



Higher sales volumes and selling prices resulted in Chemicals sales increasing 9 percent. Sales of United States exported products increased 33 percent. Selling prices were favorably affected by the positive translation effects of ex-U.S. currency denominated sales, which offset lower domestic selling prices.

Operating income was $450 million, as compared with $613 million in 1986. Operating income in 1986 included $149 million of restructuring income, principally from the sale of the Texas City, Texas, petrochemicals plant. Restructuring income was $30 million in 1987. Excluding these unusual items, 1987 operating income declined 9 percent, caused by significantly higher raw material costs during 1987. Plant capacity utilization increased to 80 percent in 1987 versus 77 percent in 1986.

Fibers sales were up 11 percent over 1986, but profitability lagged somewhat due to higher raw material costs. Sales volume of the higher margin nylon products increased in 1987. *Wear-Dated* Silver and Gold Label stain-resistant carpet fibers generated strong consumer demand in their first year in the marketplace. In addition, fibers experienced excellent customer demand and higher selling prices for nylon intermediates, such as adipic acid and nylon polymer chips.

Plastics sales were 26 percent ahead of 1986 due principally to strong household durable demand, partial pass through of higher raw material costs and growing *Santoprene* thermoplastic rubber sales. Plastics operating income, however, was down year-to-year, due to the selling price/raw material cost squeeze. *Lustran* ABS thermoplastics, used for refrigerator linings, drainpipe, automotive and other applications, had a strong performance in 1987.

Resin products sales increased 10 percent due primarily to higher selling prices. *Saflex* plastic interlayer, used in automobile windshields, was successfully introduced for new customer uses, particularly in architectural applications.

Rubber chemicals and instruments sales were 15 percent ahead of 1986 due to strong worldwide customer demand. Specialty chemicals sales were down slightly reflecting the 1986 divestiture of acetic acid. This decrease was partially offset in 1987 by higher maleic anhydride sales volume. Detergents and phosphates sales lagged 1986 by 8 percent due to lower sales volumes of detergent phosphates, offset somewhat by increased volumes of surfactants. Engineered products sales were lower, due to the August 1987 divestiture of the polyethylene bottle business, which had 1987 sales of approximately $60 million.

Research continues on many products, with the single largest effort on improved carpet fibers.

Sales in 1986 declined as compared with 1985, due to divested product lines. Sales related to the divested product lines were $645 million in 1985. For continuing product lines, sales volumes increased 4 percent in 1986, while selling prices were level. Operating income improved significantly in 1986 from an operating loss in 1985, which resulted from the costs associated with the restructuring program. All major businesses, led by fibers, achieved higher year-to-year profitability. The weaker U.S. dollar also positively contributed to the Chemicals performance in 1986.

■ Electronic Materials

Net Sales	1987	1986	1985
Electronic-grade silicon materials	**$185**	$154	$137

The Electronic Materials business produces electronic-grade silicon wafers for the semiconductor industry and has production facilities in Japan, Malaysia, South Korea, the United Kingdom and the United States.

Sales in 1987 increased 20 percent, benefiting from growth in worldwide semiconductor demand and greater penetration in ex-U.S. markets. Operating performance improved substantially, moving from an operating loss of $139 million in 1986 to nearly break-even performance in 1987. The operating loss in 1986 included a $90 million asset impairment write-down. Excluding this nonrecurring charge, 1987 profitability improved $44 million, due principally to higher sales volumes and reduced operating costs.

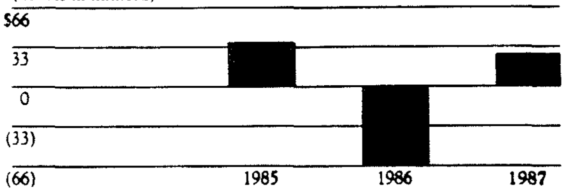
Sales in 1986 were higher than 1985, but still weak due to the prolonged downturn of the United States electronics end-user equipment markets, primarily the computer and office equipment segments. Operating losses increased substantially as a result of the asset impairment write-down.

■ Fisher Controls

Net Sales	1987	1986	1985
Valves, regulators, electronic process instrumentation, and gas separation systems	**$749**	$645	$652

Fisher Controls is a leading worldwide producer of industrial valves and regulators, as well as state-of-the-art *PROVOX* electronic process instrumentation, and gas separation systems. In addition, *UNIVOX* control center equipment was introduced in 1987.

Fisher Controls Operating Income (Loss)
(dollars in millions)



Fisher Controls turned in a much improved operating performance in 1987, due to higher sales volume in 1987 and cost reductions implemented in 1986. Sales increased 16 percent due to sales volume and selling price improvements. After a long absence, capital spending by customers (especially by the oil and gas, pulp and paper, and chemical industries) resulted in higher demand for Fisher Controls valves in 1987 — a key factor in the higher sales volume. In addition, the installation and services businesses, along with the gas separations business, continued to grow. Operating income was $26 million in 1987 versus a $66 million operating loss in 1986. The 1986 loss resulted principally from depressed sales to the chemical and oil and gas industries and from actions taken late in 1986 to reduce future operating costs.

Sales in 1986 declined 1 percent versus 1985 as a result of poor economic conditions in the oil and gas industry, and lower capital spending by customers in the chemical industry.

■ NutraSweet

Net Sales	1987	1986	1985*
NutraSweet low-calorie sweetener products	**$722**	$711	$317

For the five-month period August-December 1985.

The NutraSweet Company manufactures and markets *NutraSweet* brand low-calorie sweetener, which is sold worldwide. The company also markets *Equal* low-calorie tabletop sweetener throughout the United States.

The NutraSweet Company sales and operating income were up slightly from the prior year. Sales volume of *NutraSweet* sweetener increased 9 percent in 1987 over 1986. Benefiting NutraSweet's performance were the positive effects of continued strong growth in the United States of diet carbonated soft drinks, NutraSweet's largest market, and further manufacturing cost reductions. These positive factors were offset by the effects of lower worldwide average selling prices, some customer inventory reductions and higher administrative and technological expenses.

Operating income in 1987 also benefited from improved manufacturing performance. The installation of new process technology at the Augusta, Georgia, manufacturing facility was completed in 1987. This technology will further reduce manufacturing costs. NutraSweet's operating income was significantly affected by the amortization of intangible assets, primarily related to the aspartame patent.

Sales of $711 million in 1986 reflected strong market performance of retail products containing *NutraSweet* and changes in inventory levels throughout the distribution chain. Operating income was $142 million, benefiting from lower raw material costs and manufacturing efficiencies. Sales and operating income in 1985 were for the August-December period only, following acquisition of this business by Monsanto.

■ Pharmaceuticals

Net Sales	1987	1986	1985*
Pharmaceutical products	**$820**	$665	$262

Includes Searle for the five-month period August-December 1985.

G.D. Searle & Co. is a research-based, worldwide pharmaceuticals business concentrating on drugs for treatment of cardiovascular, gastrointestinal, immuno-inflammatory and central nervous system diseases. In 1987, approximately 50 percent of Searle's sales were from products for the treatment of cardiovascular disease. Searle does business throughout the world, including a significant presence in nine of the world's

DSW 021753

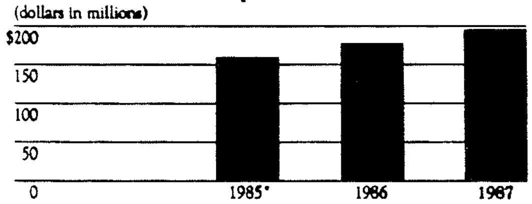
STLCOPCB4007062

top 12 pharmaceuticals markets. Nearly two-thirds of Searle's sales are in ex-U.S. markets.

Pharmaceuticals sales increased significantly, climbing 23 percent in 1987. The key factor in the increased sales was the launch of *Calan SR*, the first once-a-day calcium channel blocker drug marketed in the United States for use in controlling high blood pressure. The new formulation and a three-year period of United States marketing exclusivity had a major impact on growth of *Calan*. Sales of the family of *Calan* products exceeded $130 million in 1987.

The operating loss in 1987 was the same as in 1986. Operating income improvements, including the successful launch of *Calan SR*, were offset by higher planned research and development expenses and increased marketing expenses to promote *Calan SR*, along with costs associated with the launching of *Cytotec*, a synthetic prostaglandin drug for the treatment of peptic ulcers, in ex-U.S. markets. *Cytotec* is now approved for marketing in 40 countries. Applications are pending in 18 countries, including the major markets of the United States, Japan and the United Kingdom.

Pharmaceuticals R&D Expenses
(dollars in millions)



*Including period prior to acquisition of Searle.

Research and development expenses in 1987 increased 12 percent. At the end of 1987 there were more than a dozen new pharmaceutical candidates in clinical trials. *Kerlone*, a once-a-day cardioselective beta-blocker, is expected to be approved for treatment of hypertension in 1988. An atrial peptide, designed to treat kidney failure, is in clinical trials. Searle is also developing products obtained through licensing opportunities. A licensed quinolone-class compound shows promise of being a strong anti-infective product.

Sales in 1986 were 10 percent higher than the full year 1985, including the period prior to acquisition. Sales in 1986 benefited from more favorable ex-U.S. currency translation and increased sales of *Calan* and *Demulen* oral contraceptive. The operating losses in 1986 and 1985 resulted from aggressive research efforts in human health care and, in 1985, the costs of the restructuring program.

■ Biotechnology Product Discovery

In addition to research and development relating specifically to Monsanto's operating units, the Company conducts basic and applied biotechnological research aimed at discovering new biotechnology-based product opportunities. The focus of this research continues to be the life sciences businesses — Pharmaceuticals, Crop Chemicals and Animal Sciences. It is coordinated with the strategic direction of the life sciences businesses, and the research results are further developed and commercialized by those businesses. The cost of the current biotechnology product development effort directly related to Pharmaceuticals, Crop Chemicals and Animal Sciences activities is included as an expense in those segments.

GEOGRAPHIC DATA

	Net Sales to Unaffiliated Customers			Operating Income (Loss)			Total Assets		
	1987	1986	1985	**1987**	1986	1985	**1987**	1986	1985
United States	**$4,883**	$4,638	$4,794	**$501**	$506	$(784)	**$6,431**	$6,608	$7,077
Europe-Africa	**1,537**	1,231	1,076	**181**	117	191	**1,256**	1,013	1,019
Canada	**329**	290	298	**31**	26	34	**116**	116	120
Latin America	**293**	283	220	**2**	6	(3)	**235**	243	232
Asia-Pacific	**597**	437	359	**49**	16	9	**513**	385	299
Inter-area Eliminations				**6**	2	12	**(382)**	(338)	(259)
Corporate				**(36)**	(38)	(57)	**286**	242	389
Total consolidated	**$7,639**	$6,879	$6,747	**$734**	$635	$(598)	**$8,455**	$8,269	$8,877

The data above are prepared on an "entity basis," which means that sales, operating income and assets of a legal entity are assigned to the geographic area where the legal entity is located (e.g., a sale from the United States to Latin America is reported as a United States sale). Inter-area sales between Monsanto entities have been excluded from the above table, but are shown in the Segment Information note to the financial statements on page 40. The reported operating income for the ex-U.S. geographic areas does not include the full profitability generated by sales of Monsanto products imported from other locations, principally from the United States.

DSW 021754

STLCOPCB4007063

■ United States Sales Up, Quality of Income Improves

Sales by entities in the United States in 1987 increased 5 percent over 1986. *Roundup* herbicide, *Alimet* animal feed supplement, *Wear-Dated* carpet fibers, *Lustran* ABS thermoplastics and *Calan* SR calcium channel blocker were particularly strong performers in 1987. Direct sales from the United States to ex-U.S. third party customers were $408 million, $279 million and $379 million for 1987, 1986 and 1985, respectively.

Operating income in 1987 was positively affected by the sales growth of *Roundup* herbicide and the improved profitability of Fisher Controls and Electronic Materials, partially offset by lower profit margins in the Chemicals unit. Sales and profitability of *Lasso* herbicide were lower in 1987 due to lower planted corn acreage, erosion of market share and increased competitive pressure on selling prices. Operating income in 1986 included $155 million of restructuring income, partially offset by $90 million of expense related to the Electronic Materials asset write-down. Operating income in 1987 included $32 million of restructuring income. Excluding these unusual items, operating income increased 6 percent in 1987.

Sales in 1986 declined slightly from 1985, but the comparison is affected by divestitures and the acquisition of Searle and NutraSweet. Sales of continuing businesses increased 2 percent in 1986, on the strength of Chemicals, NutraSweet and *Roundup* herbicide sales. Operating income was positively affected by the improved profitability of the Chemicals businesses, growth of *Roundup* herbicide, the inclusion of NutraSweet operating results for the full year and the effects of cost reduction measures and lower raw material costs. Sales of *Lasso* herbicide were depressed because of extreme weakness in its end-use markets. Operating income in 1985 included $963 million net expense related to the 1985 restructuring program.

■ Europe-Africa Benefits From Higher Volume and Weaker U.S. Dollar

Sales by entities in Europe-Africa improved 25 percent over 1986, while operating income increased 55 percent. Sales and operating income benefited in 1987 from the effect of ex-U.S. currency translation, resulting from the continued weakening of the U.S. dollar, and increased sales volumes of United States produced products sold in Europe-Africa.

The operating income improvement in 1987 was led by a turnaround in Fisher Controls and higher Pharmaceuticals sales. *Roundup* and *Avadex* herbicides, *Saflex* plastic interlayer, *Lustran* ABS thermoplastic and rubber chemicals also contributed to the excellent sales and operating income. Operating income in 1986 included cost reduction program expenses of Fisher Controls.

Sales in 1986 increased 14 percent over 1985. The comparison is affected by divested product lines and by the inclusion of Searle results for the full year 1986. Sales volume gains in *Roundup* herbicide and certain chemical products benefited the 1986 performance. Operating income in 1985 included profits generated by the chemical intermediates plant at Seal Sands, United Kingdom, which was sold in late 1985. In addition, 1985 operating income included $26 million of net restructuring income.

■ Canadian Herbicide Sales Increase

Canadian sales and operating income increased 13 percent and 19 percent, respectively, over 1986. The effect of translating stronger Canadian dollar-denominated operating results into U.S. dollars helped 1987 sales and operating income. Most business segments improved over 1986, led by strong sales volumes of *Roundup* and *Avadex* BW herbicides and chemicals.

Sales in 1986 were 3 percent lower than in 1985, due to lower sales of *Avadex* BW herbicide and discontinued product lines, partially offset by NutraSweet sales and the inclusion of Searle sales for the full year 1986. Operating income declined 24 percent from 1985, due to the lower sales of *Avadex* BW and the divested oil and gas operations. These factors were somewhat offset by the inclusion of Searle's full year operating income.

■ Latin American Results Mixed

Latin American sales in 1987 increased 4 percent, but operating income declined. Sales volumes of *Roundup* herbicide, *Lustrex* polystyrene and rubber chemicals improved in 1987 despite the uncertain economic conditions in major Latin American countries. An unfavorable change in sales mix coupled with the impact of currency devaluation in Argentina resulted in a year-to-year decline in operating income. The Pharmaceuticals business was hampered by import restrictions in Brazil. Latin American operating income does not include the equity income from Monsanto's joint venture companies in Latin America. Such equity income is reflected in "Other income—net" in Monsanto's Statement of Consolidated Income.

Sales increased 29 percent in 1986 as compared with 1985, due primarily to the inclusion of Searle sales for the full year 1986, and strong performances by Crop Chemicals, *Lustrex* polystyrene, rubber chemicals and phosphates. Shipments of *Roundup* herbicide were particularly strong in 1986.

GEOGRAPHIC DATA (continued)

■ Asia-Pacific Benefits From Strong Performance of Several Products

Asia-Pacific sales and operating income improved 37 percent and 206 percent, respectively, over 1986. Sales and profitability of styrene, phenol and *Lustrex* polystyrene were particularly strong in Australia. Fisher Controls and Pharmaceuticals also had significant sales and operating income improvements. In addition, sales volume of *Roundup* herbicide was higher in all major Asia-Pacific countries.

Sales and operating income increased in 1986 partially due to the inclusion of Searle operating results for the full year. Sales and operating income also benefited from higher sales volume of *Roundup* herbicide and the positive effect of translating ex-U.S. currency-denominated sales into U.S. dollars.

QUARTERLY DATA

		First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
Net Sales	**1987**	**$1,866**	**$2,025**	**$1,902**	**$1,846**	**$7,639**
	1986	1,745	1,869	1,695	1,570	6,879
Gross Profit	**1987**	**765**	**801**	**684**	**634**	**2,884**
	1986	678	778	527	552	2,535
Net Income	**1987**	**138**	**154**	**100**	**44**	**436**
	1986	118	148	144	23	433
Earnings per Share	**1987**	**1.76**	**1.95**	**1.30**	**0.62**	**5.63**
	1986	1.52	1.90	1.85	0.28	5.55
Dividends per Share	**1987**	**0.65**	**0.70**	**0.70**	**0.70**	**2.75**
	1986	0.625	0.65	0.65	0.65	2.575
Common Stock Price						
1987	**High**	**87⅜**	**89⅜**	**99⅝**	**100¼**	**100¼**
	Low	**73**	**77¼**	**83**	**57**	**57**
1986	High	65¼	74⅞	77	81½	81½
	Low	44¼	56¾	63½	67⅞	44¾

Net income for each quarter, except the third quarter, was higher in 1987 than the comparable 1986 quarter. Net income in the third quarter of 1986 included several unusual items, principally restructuring income and gains from asset sales, partially offset by the Electronic Materials property write-down. Monsanto's net income is historically higher during the first half of the year. This is due to the concentration of the generally more profitable Crop Chemicals sales in the first half of the year.

The unusual items increasing (decreasing) earnings per share (after related taxes) in 1987 and 1986 were as follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1987					
Restructuring income — net		**$0.02**	**$0.09**	**$0.13**	**$0.24**
1986					
Restructuring income — net			1.04	0.21	1.25
Gains from other asset sales			0.75	0.08	0.83
Electronic Materials property write-down			(0.59)		(0.59)
Change in annual effective tax rate	$(0.04)	(0.08)	(0.06)	0.18	
Other nonrecurring expenses			(0.39)		(0.39)

STATEMENT OF CONSOLIDATED FINANCIAL POSITION

(Dollars in millions, except per share)	At December 31,	
Assets	**1987**	1986
Current Assets:		
Cash, time deposits and certificates of deposit	**$ 180**	$ 206
Short-term securities, at cost which approximates market	**43**	68
Trade receivables, net of allowances of $38 in 1987 and $36 in 1986	**1,209**	1,037
Miscellaneous receivables and prepaid expenses	**325**	221
Deferred income tax benefit	**165**	207
Inventories	**1,081**	1,069
Total Current Assets	3,003	2,808
Intangible Assets, net of accumulated amortization of $566 in 1987 and $337 in 1986	**1,953**	2,144
Investments in Affiliates	**240**	198
Other Assets	**183**	206
Property, Plant and Equipment:		
Land	**112**	102
Buildings	**1,097**	1,002
Machinery and equipment	**5,242**	4,964
Construction-in-progress	**279**	258
Total property, plant and equipment	**6,730**	6,326
Less accumulated depreciation	**3,654**	3,413
Net Property, Plant and Equipment	3,076	2,913
Total Assets	**$8,455**	$8,269

Liabilities and Shareowners' Equity		
Current Liabilities:		
Accounts payable	**$ 527**	$ 460
Wages	**145**	133
Income and other taxes	**101**	157
Miscellaneous accruals	**488**	577
Short-term debt	**539**	389
Total Current Liabilities	**1,800**	1,716
Long-Term Debt	**1,564**	1,630
Deferred Income Taxes	**584**	548
Other Liabilities	**506**	594
Shareowners' Equity:		
Common stock — authorized, 200,000,000 shares, par value $2; issued, 82,197,097 shares in 1987 and 1986	**164**	164
Additional contributed capital	**872**	861
Accumulated currency adjustment	**100**	(98)
Reinvested earnings	**3,282**	3,058
Treasury stock, at cost (8,099,580 shares in 1987 and 4,538,008 shares in 1986)	**(517)**	(204)
Total Shareowners' Equity	**3,901**	3,781
Total Liabilities and Shareowners' Equity	**$8,455**	$8,269

The above statement should be read in conjunction with pages 35 through 40 of this report.

DSW 021757

Monsanto's financial position further strengthened in 1987, with improvements in the interest coverage ratio and the book value per share, and a continued strong debt to capitalization ratio.

■ Financial Ratios Improve

Management desires to maintain Monsanto's "A" or equivalent debt rating, which management believes assures adequate financial flexibility and access to the full range of worldwide debt markets. Management believes that a total debt to total capitalization ratio of approximately 35 percent is appropriate. Management also intends to manage the interest coverage ratio at levels consistent with Monsanto's bond rating objective.

The total debt to total capitalization ratio was 35 percent at year-end 1987, the same as the prior year. The interest coverage ratio improved to 4.3 in 1987, compared with 3.2 in 1986 (excluding restructuring income).

Monsanto has available various short- and medium-term bank credit facilities, which are discussed in the "Short-Term Debt and Credit Arrangements" and "Long-Term Debt" notes to financial statements (page 37). These bank credit facilities provide financing flexibility for future funding requirements and permit the Company to take advantage of investment opportunities that may arise. When beneficial, Monsanto utilizes both the United States and ex-U.S. financial markets for its financing needs. Monsanto's assets generally are free from lien and not used to collateralize debt.

■ Sales Growth Results in Increased Working Capital

Working capital was $1,203 million at year-end 1987, a $111 million increase over year-end 1986, as a result of the year-to-year sales growth. The current ratio was 1.7 at year-end 1987, compared with 1.6 at year-end 1986. Trade receivables increased due to higher sales volumes during late 1987. Inventories were level at year-end 1987 versus 1986, with the year-end 1987 inventory turnover ratio approximating 4 times per year.

Intangible assets declined due to amortization, principally of the NutraSweet aspartame patent. Net property, plant and equipment increased in 1987, as capital expenditures and the translation effect of ex-U.S. currencies exceeded depreciation, retirements and divestitures.

In December 1987, the Financial Accounting Standards Board issued Statement No.96, "Accounting for Income Taxes." This new accounting standard, which is effective beginning in 1989, requires that deferred tax assets and liabilities shown on the balance sheet be adjusted to reflect the current estimate of the actual tax asset or liability that ultimately will be received or paid. If the new accounting rule had been adopted in 1987, the net deferred tax liability would have been reduced by approximately $90 million and the impact on 1987 income tax expense would have been immaterial.

Monsanto continually evaluates risk retention and insurance levels for product liability, property damage and other potential areas of risk. Monsanto devotes significant effort to maintaining and improving safety and internal control programs, which reduce exposure to certain risks. Based on the cost and availability of insurance and the likelihood of a loss occurring, management decides the amount of insurance coverage to purchase from unaffiliated companies and the appropriate amount of risk to retain. To achieve the optimal balance of risk and cost, Monsanto is retaining a greater portion of its total risk than it had prior to 1986. This risk includes being insured in the liability area on the "claims made" policy basis. Management believes that the current levels of risk retention are appropriate and are consistent with those of other companies in the various industries in which Monsanto operates.

Key Financial Statistics

	1987	1986
Working Capital (Current assets less current liabilities)	**$1,203**	$1,092
Current Ratio (Current assets divided by current liabilities)	**1.7**	1.6
Percent of Total Debt to Total Capitalization*	**35%**	35%

**Total capitalization is the sum of short-term debt, long-term debt and shareowners' equity.*

DSW 021758

STLCOPCB4007067

STATEMENT OF CONSOLIDATED CASH FLOW

(Dollars in millions)

Increase (Decrease) in Cash and Cash Equivalents	**1987**	1986	1985
Operating Activities:			
Net income (loss)	**$ 436**	$ 433	$ (98)
Add income tax expense (benefit)	**237**	203	(170)
Deduct extraordinary gain			(30)
Income (loss) before income taxes and extraordinary gain	**673**	636	(298)
Income tax payments	**(229)**	(221)	(273)
Items which did not use (provide) cash:			
Depreciation and amortization	**679**	780	599
Restructuring expense (income)	**(32)**	(158)	949
Other	**37**	(9)	(39)
Working capital changes that provided (used) cash:			
Accounts receivable	**(172)**	117	2
Inventories	**(22)**	(2)	(54)
Accounts payable and accrued liabilities	**13**	(173)	–
Other	**(19)**	80	41
Nonoperating gains from asset disposals (before tax)	**(26)**	(90)	(392)
Cash Provided by Operations	**902**	960	535
Investing Activities:			
Property, plant and equipment purchases	**(505)**	(520)	(645)
Acquisition payments for Searle, net of cash acquired of $216			(2,538)
Acquisition and investment payments (other than Searle)	**(59)**	(29)	(78)
Investment and property disposal proceeds	**75**	503	1,469
Cash Used in Investing Activities	**(489)**	(46)	(1,792)
Financing Activities:			
Net change in short-term financing	**150**	33	(108)
Long-term debt proceeds	**26**	675	415
Long-term debt repayments	**(122)**	(1,139)	(555)
Searle acquisition financing proceeds			2,754
Short-term debt repayments (Searle acquisition)		(348)	(1,154)
Treasury stock purchases	**(339)**		(91)
Dividend payments	**(212)**	(199)	(188)
Other financing activities	**33**	45	18
Cash (Used in) Provided by Financing Activities	**(464)**	(933)	1,091
Decrease in Cash and Cash Equivalents*	**$ (51)**	$ (19)	$ (166)

The above statement should be read in conjunction with pages 35 through 40 of this report.

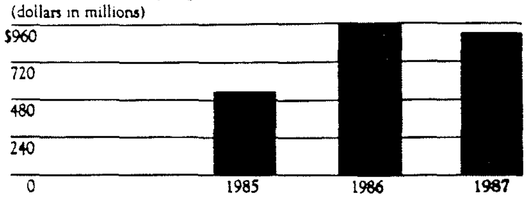
**Includes cash, time deposits, certificates of deposit and short-term securities.*

DSW 021759

STLCOPCB4007068

Monsanto's cash flow for the three-year period 1987-1985 is shown in the Statement of Consolidated Cash Flow on the preceding page. The format of this statement has been changed from prior years to comply with the recently issued Statement of Financial Accounting Standards No. 95, "Statement of Cash Flows."

Cash Provided by Operations
(dollars in millions)



■ **Operations Provide Significant Cash Inflows**
Historically, one of Monsanto's strong points has been the ability to provide significant cash flow from operations. The current businesses with the strongest cash generating capabilities are Chemicals, Crop Chemicals and NutraSweet. Although operating income improved significantly in 1987, cash provided by operations in 1987 declined due primarily to the increased working capital requirements related to the higher operating levels. Cash provided by operations was $902 million in 1987, as compared with $960 million in 1986.

A principal investing activity was the cash used for capital expenditures, which were $505 million in 1987, down slightly from 1986. Monsanto's movement in recent years from capital-intensive businesses to research-based businesses has reduced the required level of new investment in property, plant and equipment. There were no individually significant capital expenditures in 1987. Non-operating cash was provided by the sale of businesses and other assets in 1987 and prior years. The principal business divestitures were the polyethylene bottle business in 1987; the Texas City, Texas, petrochemicals plant in 1986; and the oil and gas operations, the Seal Sands, United Kingdom, chemical intermediates plant, Searle's nonprescription pharmaceuticals business and the investment in Pearle Health Services, Inc. in 1985.

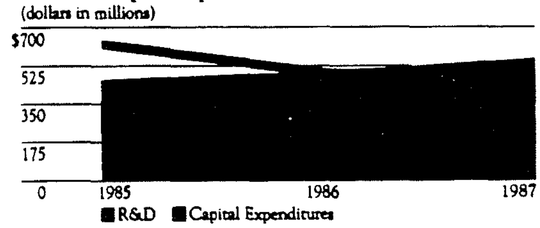
Comparisons of annual cash provided by operations with investment levels are affected by inflation. Other than the 1985 acquisition of Searle and NutraSweet, Monsanto's operations have generated sufficient cash to fund investments required to maintain the existing earnings base, research programs and growth-related investments. Management expects that Monsanto's growth in the future will be financed with cash provided by operations.

■ **Major Stock Purchase Program Initiated**
During 1987, under two separate actions, the Company's Board of Directors authorized the Company to purchase up to 8 million shares of Monsanto common stock. As of year-end 1987, the Company had purchased 4.1 million shares for $339 million.

■ **Dividends Increase for the 15th Consecutive Year**
The Company has paid dividends on its common shares without interruption or reduction since 1928 and has increased the dividend in each of the past 15 years. Dividend payout for 1987 was 24 percent of cash provided by operations and 49 percent of net income. The Company's dividend policy reflects a desired long-term payout percentage based on Monsanto's expectation of future growth and profitability levels. In any individual year, additional consideration is given to expected financial position and results, working and fixed capital needs, scheduled debt repayments and economic conditions, including inflation.

Monsanto's common stock is traded principally on the New York Stock Exchange. The number of shareowners of record as of February 26, 1988, was 67,882 and the high and low common stock prices on that date were $87⅝ and $86½.

R&D vs. Capital Expenditures
(dollars in millions)



DSW 021760

STLCOPCB4007069

STATEMENT OF CONSOLIDATED SHAREOWNERS' EQUITY

(Dollars in millions, except per share)	**1987**	1986	1985
Common Stock:			
Balance, January 1 and December 31	**$ 164**	$ 164	$ 164
Additional Contributed Capital:			
Balance, January 1	**$ 861**	$ 854	$ 855
Employee stock plans	**11**	7	(1)
Balance, December 31	**$ 872**	$ 861	$ 854
Accumulated Currency Adjustment:			
Balance, January 1	**$ (98)**	$ (191)	$ (319)
Translation adjustments	**197**	103	131
Income taxes	**1**	(10)	(3)
Balance, December 31	**$ 100**	$ (98)	$ (191)
Reinvested Earnings:			
Balance, January 1	**$3,058**	$2,824	$3,110
Net income (loss)	**436**	433	(98)
Dividends	**(212)**	(199)	(188)
Balance, December 31	**$3,282**	$3,058	$2,824
Common Stock in Treasury:			
Balance, January 1	**$ (204)**	$ (244)	$ (176)
Shares purchased (4,120,100 and 2,052,300 shares in 1987 and 1985, respectively)	**(339)**		(91)
Issuances under employee stock plans (558,528; 906,536 and 523,827 shares in 1987-1985, respectively)	**26**	40	23
Balance, December 31	**$ (517)**	$ (204)	$ (244)

The above statement should be read in conjunction with pages 35 through 40 of this report.

Key Financial Statistics

		1987	1986	1985
Stock Price*	High	**$ 100¼**	$ 81½	$ 55⅛
	Low	**57**	44¼	40⅝
	Year-end	**83**	76½	47¾
Per Share	Dividends	**2.75**	2.575	2.45
	Shareowners' Equity	**52.65**	48.69	44.38
Average Daily Share Trading Volume (thousands of shares)		**372**	269	290

Based on daily reported high and low stock prices.

Significant Accounting Policies
Monsanto's significant accounting policies are italicized in the following Notes to Financial Statements.

Basis of Consolidation
The consolidated financial statements include the Company and its majority-owned subsidiaries. Intercompany transactions have been eliminated in consolidation. Other companies in which Monsanto has a significant ownership interest (generally greater than 20 percent) are included in "Investments in Affiliates" in the Statement of Consolidated Financial Position, and Monsanto's share of these companies' income or loss is included in "Other income — net" in the Statement of Consolidated Income.

Currency Translation
Most of Monsanto's ex-U.S. entities' financial statements are translated into U.S. dollars using current exchange rates. Unrealized currency adjustments in the Statement of Consolidated Financial Position are accumulated in shareowners' equity. The financial statements of ex-U.S. entities that operate in hyperinflationary economies, including Brazil, Mexico and Argentina, are translated at either current or historical exchange rates, as appropriate. These currency adjustments are included in net income.

Major currencies are the U.S. dollar, British pound sterling and Belgian franc. Other important currencies include the Australian dollar, Brazilian cruzado, Canadian dollar, French franc, Japanese yen, Mexican peso and West German mark. Currency restrictions are not expected to have a significant effect on Monsanto's cash flow, liquidity or capital resources.

Principal Acquisitions
In August 1985, Monsanto acquired G.D. Searle & Co. for $2,754 million. The pharmaceutical business of Searle and the former health care division of Monsanto operate as G.D. Searle & Co., a Monsanto subsidiary. The low-calorie sweetener business, formerly a part of Searle, operates as another Monsanto subsidiary, The NutraSweet Company. The acquisition was accounted for using the purchase method. The acquisition included total assets with a fair market value of $4,204 million and liabilities of $1,450 million. The $604 million excess of the purchase price over the fair value of the identifiable net assets acquired is being amortized on a straight-line basis over 40 years. The financial results of the acquired operations have been included in the Statement of Consolidated Income from August 1985.

If the acquisition had occurred on January 1, 1985, the pro forma results for 1985 would have reflected net sales of $7,150 million and a net loss of $136 million ($1.77 per share). These pro forma results include the acquired operations for the full year 1985, and also include increased amortization of intangible assets, increased interest expense on the acquisition debt and related income tax effects. The pro forma results reflect lower interest expense that would have resulted from using the net proceeds from certain sales of assets to reduce debt, as if those transactions had occurred on January 1, 1985. The gains or losses on those asset sales, principally Monsanto's oil and gas business, have been excluded from the pro forma results.

The pro forma operating results do not purport to present Monsanto's actual operating results had the acquisition and the major asset sales referred to above occurred on January 1, 1985.

Restructuring
In October 1985, the Company implemented a restructuring and reorganization program. The actions included the withdrawal from selected low-return businesses and production facilities, the sale of certain assets that no longer had strategic importance and reductions in the number of employees.

In 1985 Monsanto provided a $949 million charge to "Restructuring expense (income) — net" in the Statement of Consolidated Income. This charge principally comprised asset write-downs and the cost of employee reductions, partially offset by asset sale gains. The principal 1985 sale was the Seal Sands, United Kingdom, chemical intermediates plant at a net after-tax gain of $82 million, or $1.06 per share.

The impact on 1985 net income from the restructuring and reorganization program was $542 million (net of estimated tax benefits of $407 million), or $7.04 per share.

Also in 1985, Monsanto sold its oil and gas operations at a net gain of $201 million ($392 million before tax), or $2.61 per share. The gain is shown separately in the Statement of Consolidated Income.

The 1986 gain included in "Restructuring expense (income) — net" resulted from the sales of product lines that were planned for divestiture under the 1985 restructuring program. The principal sale was those product lines of the Texas City, Texas, petrochemicals plant that were part of the restructuring program. The impact on 1986 net income from the restructuring gain was $97 million (after related taxes), or $1.25 per share.

The restructuring program was substantially completed by the end of 1986. Net sales in 1985 of the subsequently divested product lines, principally in the Chemicals segment, were $931 million.

■ Depreciation and Amortization

	1987	1986	1985
Depreciation	**$421**	$423	$477
Amortization of intangible assets	**225**	218	88
Obsolescence	**33**	139	34
Total	**$679**	$780	$599

Property is recorded at cost. The cost of plant and equipment is depreciated over weighted average periods of 23 years for buildings and 12 years for machinery and equipment, using the straight-line method.

Obsolescence in 1986 included a $90 million charge ($46 million after tax, or $0.59 per share) to write down property, plant and equipment values of the Electronic Materials segment to amounts expected to be recovered from future cash flows.

Intangible assets are recorded at cost less amortization. The components of intangible assets, and their estimated remaining useful lives, were as follows:

	Estimated Remaining Life*	1987	1986
Patents	6	**$1,057**	$1,234
Goodwill	35	**639**	653
Other intangible assets	25	**257**	257
Total		**$1,953**	$2,144

*Weighted average, in years, at December 31, 1987.

The cost of patents obtained in a business acquisition is initially recorded at the present value of estimated future cash flows resulting from patent ownership. The cost of patents is amortized over their legal lives. Goodwill is the cost of acquired businesses in excess of the fair value of their identifiable net assets, and is amortized over periods of 5 to 40 years. The cost of other intangible assets (principally product rights and trademarks) is amortized over their estimated useful lives.

■ Inventory Valuation

Inventories are stated at cost or market, whichever is less. 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 costs include direct labor, raw material and manufacturing overhead based on practical capacity. The cost of 52 percent of all inventories is determined using the last-in, first-out (LIFO) method, generally reflecting 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 using the first-in, first-out (FIFO) method.

The components of inventories were as follows:

	1987	1986
Finished goods	**$ 689**	$ 707
Goods in process	**261**	225
Raw materials and supplies	**461**	426
Inventories, at FIFO cost	**1,411**	1,358
Excess of FIFO over LIFO cost	**(330)**	(289)
Inventories, at LIFO cost	**$1,081**	$1,069

Inventories at FIFO cost approximate current cost.

■ Income Taxes

The components of income before income taxes were:

	1987	1986	1985
U.S.	**$422**	$462	$(590)
Ex-U.S.	**251**	174	292
Total	**$673**	$636	$(298)

The components of income tax expense were:

		1987	1986	1985
Current:	Federal	**$ 82**	$ 20	$ 44
	State	**14**	12	13
	Ex-U.S.	**72**	88	154
		168	120	211
Deferred:	Federal	**39**	74	(338)
	State	**9**	13	(21)
	Ex-U.S.	**21**	(4)	(22)
		69	83	(381)
Total		**$237**	$203	$(170)

Deferred taxes result from timing differences in the recognition of revenue and expense for tax and financial statement purposes. The source of these timing differences and the tax effect of each were as follows:

	1987	1986	1985
Depreciation and obsolescence	**$ 46**	$(61)	$ 70
Restructuring program	**43**	161	(307)
Employee benefit plans	**15**	(10)	(32)
Intangible drilling and development costs			(98)
Other	**(35)**	(7)	(14)
Total	**$ 69**	$ 83	$(381)

DSW 021763

STLCOPCB4007072

Factors causing Monsanto's effective tax rate to differ from the United States federal statutory rate were:

	1987	1986	1985
Federal statutory rate	**40%**	46%	(46)%
Higher (lower) ex-U.S. tax rates	**(1)**	1	(12)
Investment and other tax credits	**(1)**	(4)	(9)
Capital gains benefits	**(2)**	(8)	
Benefits attributable to:			
United States export earnings	**(2)**	(3)	(3)
Puerto Rico operations	**(2)**	(3)	(2)
Dividends from ex-U.S. subsidiaries	**1**	1	9
Reversal of prior years' foreign tax credits			8
Other	**2**	2	(2)
Effective income tax rate	**35%**	32%	(57)%

Investment tax credits were available in 1986 and earlier years as a reduction of the United States federal income tax liability. Such credits were recorded as a reduction of income tax expense in the year they reduced the United States federal income tax liability. Investment tax credits, net of recapture, were $15 million for 1986 and $10 million for 1985.

Income and remittance taxes have not been recorded on $510 million of undistributed earnings of subsidiaries, either because any taxes on dividends would be offset substantially by foreign tax credits or because Monsanto intends to indefinitely reinvest those earnings. Income and remittance taxes on these earnings would be approximately $50 million at December 31, 1987.

■ Short-Term Debt and Credit Arrangements

Short-term debt was:

	1987	1986
Notes payable:		
Banks	**$127**	$107
Commercial paper	**157**	14
Bank overdrafts	**136**	130
Current portion of long-term debt	**119**	138
Total	**$539**	$389
Maximum amount of notes payable and bank overdrafts outstanding at any month-end	**$438**	$611
Average notes payable and bank overdrafts outstanding	**335**	372
Weighted average interest rate during the year	**8%**	8½%
Weighted average interest rate at December 31	**7½%**	7½%

Certain ex-U.S. subsidiaries have aggregate short-term loan facilities of $355 million, under which loans totaling $127 million were outstanding at December 31, 1987. Interest on these loans is related to various ex-U.S. bank rates. Monsanto's worldwide unused short-term loan facilities were $228 million at December 31, 1987.

■ Long-Term Debt

Long-term debt (exclusive of current maturities) was:

	1987	1986
Industrial development bond obligations, weighted average interest rate of 7½%, due 1989 to 2021	**$ 262**	$ 264
Medium-term notes, weighted average interest rate of 7½%, due 1989 to 1990	**44**	131
9¼% Eurodollar notes due 1991	**101**	101
10⅛% notes due 1992	**150**	150
9⅛% notes due 1996	**150**	150
8½% sinking fund debentures due 2000	**127**	127
8¾% sinking fund debentures due 2008	**169**	169
11⅛% sinking fund debentures due 2015	**225**	225
Other	**336**	313
Total	**$1,564**	$1,630

Maturities and sinking fund requirements on long-term debt are $119 million, $141 million, $51 million, $137 million and $185 million for 1988-1992, respectively.

A $750 million intermediate-term credit facility expires ratably from 1991 to 1994. There were no borrowings under this facility at December 31, 1987. The credit facility is used to support the issuance of commercial paper ($157 million outstanding at December 31, 1987). Interest on amounts borrowed under this agreement would likely be at money market rates determined by competitive bidding. Alternatively, interest may also be at, or at a margin above, the Citibank, N.A. base interest rate, or at a margin above either the rates paid on certificates of deposit or the London Interbank Offered Rate (LIBOR).

Covenants under this credit facility restrict maximum borrowings. It is not anticipated that future borrowings will be limited by these restrictions.

In November 1985, the Company repaid $168 million principal amount of debentures and notes prior to their scheduled maturity from 1993 to 2008. Because these debentures and notes were repaid at less than face value, the Company recorded an extraordinary net gain of $30 million ($59 million before tax), or $0.40 per share.

DSW 021764

STLCOPCB4007073

■ Pension Benefits

Most Monsanto employees are covered by noncontributory pension plans. In 1986 Monsanto adopted Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions" (SFAS No. 87). Information for 1985 has not been restated.

The components of pension cost for 1987 and 1986 were as follows:

	1987	1986
Service cost for benefits earned during the year	**$ 64**	$ 60
Interest cost on projected benefit obligation	**212**	202
Assumed return on plan assets*	**(237)**	(208)
Amortization of unrecognized net gain	**(32)**	(21)
Total	**$ 7**	$ 33

Actual return on plan assets was $187 million in 1987 and $458 million in 1986.

Pension cost for all plans was $85 million in 1985.

Pension benefits are determined based on the employee's years of service and compensation level. Pension plans are funded in accordance with Monsanto's long-range projections of the plans' financial conditions, considering benefits earned and expected to be earned in the future, anticipated future returns on pension plan assets and income tax and other regulations.

In accordance with SFAS No. 87, the excess of the fair value of plan assets over the projected benefit obligation at the date of adoption is being amortized over the average expected future service periods of employees (ranging generally from 14 to 18 years). Also in accordance with SFAS No. 87, the fair value of plan assets was used to calculate the assumed return on plan assets for 1987 and 1986. These two changes from prior practice were the primary cause for the $52 million decrease in pension expense in 1986 as compared to 1985. In 1986, the lower pension expense principally benefited the Crop Chemicals segment (approximately $7 million) and the Chemicals segment (approximately $25 million). Pension expense was lower in 1987 due principally to the effect of favorable investment performance of plan assets in 1986.

Assumptions used for the principal plans were as follows:

	1987	1986	1985
Discount rate	**8½%**	8¼%	8½%
Assumed long-term rate of return on plan assets	**8½**	8½	8½
Annual rates of salary increase (for plans that base benefits on final compensation level)	**6½**	6½	6½

The funded status of Monsanto's pension plans at year-end was:

	1987	1986
Actuarial present value of plan benefits:		
Vested	**$2,124**	$2,124
Nonvested	**154**	187
Accumulated benefit obligation	**2,278**	2,311
Effect of projected future salary increases	**337**	303
Projected benefit obligation	**$2,615**	$2,614
Plan assets at fair value	**$3,118**	$3,014
Excess of plan assets over projected benefit obligation	**$ 503**	$ 400
Less:		
Unrecognized net gain at adoption of SFAS No. 87	**422**	412
Subsequent unrecognized net gain	**257**	178
Accrued pension liability	**$ 176**	$ 190

Projected benefit obligations and plan assets included in the above table for the principal United States plans were approximately $2,407 million and $2,767 million, respectively, at December 31, 1987. Plan assets consist principally of common stocks and United States government and corporate obligations. Because the Company's pension plans are well-funded, contributions to the Company's principal plans were neither required nor made in 1987 and 1986.

For some employee savings plans, employee contributions are matched in part by Monsanto. The 1987-1985 expense recorded for such plans was $33 million, $35 million and $36 million, respectively.

■ Other Postretirement Benefits

Monsanto provides certain health care and life insurance benefits for retired employees. Substantially all of Monsanto's regular, full-time United States employees and certain employees in other countries may become eligible for these benefits if they reach retirement age while employed by Monsanto.

At December 31, 1987, approximately 31,200 active employees were eligible upon retirement to participate in these programs. In addition, approximately 17,500 individuals retired from active service were eligible to participate in these programs. *These other postretirement benefits are not funded and are expensed as benefits are paid.* The 1987-1985 expense recorded for other postretirement benefits was $37 million, $26 million and $18 million, respectively.

■ Stock Option Plans

As an incentive to increase shareowner value, key officers and employees are granted Monsanto stock options under the Company's 1974 and 1984 Management Incentive Plans and the Searle Monsanto Stock Option Plan (Searle Plan). Information about the status of such stock options is presented below.

		Shares Exercisable	Shares Outstanding	Price per Share
December 31, 1985		1,703,124	2,871,626	$26.16 - $57.59
1986:	Granted		583,650	46.06 - 79.31
	Exercised		(872,808)	26.16 - 57.59
	Expired		(98,301)	38.66 - 69.00
December 31, 1986		1,295,094	2,484,167	26.16 - 79.31
1987:	Granted		**620,200**	**66.56 - 94.19**
	Exercised		**(550,559)**	**26.16 - 69.00**
	Expired		**(28,751)**	**41.75 - 94.19**
December 31, 1987		**1,203,305**	**2,525,057**	**26.16 - 94.19**

Under the 1984 Management Incentive Plan and the Searle Plan, 1,947,092 shares remain available for grant.

Stock appreciation rights (SARs) are authorized to be granted to Monsanto officers in tandem with stock options under both the Company's 1974 and 1984 Plans, including retroactive grants for unexercised options. SARs may be exercised in lieu of stock options included in the table above. At December 31, 1987, SARs related to stock options for 714,402 shares were outstanding, of which 270,800 options were exercisable. During 1987, SARs related to stock options for 114,200 shares were granted and for 105,370 shares were exercised.

■ Earnings per Share

Earnings per share were computed using the weighted average number of common shares and common share equivalents outstanding each year (77,498,752; 77,957,975 and 76,995,625 in 1987-1985, respectively). Common share equivalents (645,527; 616,178 and 116,247 in 1987-1985, respectively) consist primarily of common stock issuable upon exercise of outstanding stock options. Earnings per share assuming full dilution were not significantly different from the primary amounts.

■ Capital Stock

At December 31, 1987, there were 4,472,149 common shares reserved for employee stock options.

In January 1986, the Company's Board of Directors declared a dividend to shareowners consisting of one Common Stock Purchase Right on each outstanding share of the Company's common stock. A right will also be issued with each share of the Company's common stock that becomes outstanding prior to the time the rights become exercisable or expire. If a person or group acquires beneficial ownership of 20 percent or more, or announces a tender offer that would result in beneficial ownership of 30 percent or more, of the Company's outstanding common stock, the rights become exercisable and each right will entitle its holder to purchase one share of the Company's common stock for $150. If Monsanto is acquired in a business combination transaction, each right will entitle its holder to purchase, for $150, common shares of the acquiring company having a market value of $300. Alternatively, if a 20 percent holder were to acquire Monsanto by means of a reverse merger in which Monsanto and its stock survive or were to engage in certain "self-dealing" transactions, each right not owned by the 20 percent holder would entitle its holder to purchase, for $150, common shares of the Company having a market value of $300. The Company can redeem each right for 5 cents at any time prior to its becoming exercisable. The rights expire in 1996. These rights may cause substantial ownership dilution to a person or group who attempts to acquire the Company without approval of the Company's Board of Directors. The rights should not interfere with a business combination transaction that has been approved by the Board of Directors. As of December 31, 1987, 74,097,517 rights were outstanding.

■ Commitments and Contingencies

Commitments, principally in connection with uncompleted additions to property, were approximately $137 million at December 31, 1987. Monsanto was contingently liable as guarantor of bank loans and for discounted customers' receivables totaling approximately $111 million at December 31, 1987. Future minimum payments under noncancellable operating leases and unconditional inventory purchases are $64 million; $62 million; $55 million; $50 million and $47 million for 1988-1992, respectively, and $148 million thereafter.

Monsanto is a party to a number of lawsuits, which it is vigorously defending, arising in the normal course of business. Certain of these actions seek damages in very large amounts. While the results of litigation cannot be predicted with certainty, management believes, based upon the advice of Company counsel, that the final outcome of such litigation will not have a material adverse effect on Monsanto's consolidated financial position.

■ Supplemental Data

Supplemental income statement data were as follows:

	1987	1986	1985
Raw material and energy costs	**$2,383**	$2,023	$2,557
Employee compensation and benefits	**1,955**	1,937	1,886
Current income and other taxes	**398**	356	435
Rent expense	**108**	99	92
Technological expenses:			
Research and development	**557**	523	470
Engineering, commercial development and patent	**58**	73	78
Total technological expenses	**615**	596	548
Interest expense:			
Total interest cost	**188**	215	192
Less capitalized interest	**(16)**	(14)	(14)
Net interest expense	**172**	201	178
Equity in affiliates' income	**7**	12	25
Currency gains (losses) including equity in affiliates' currency gains and losses	**(11)**	8	(13)

■ Segment Information

Certain operating unit segment data and geographic data for 1987-1985 appear on pages 23 and 27, and are integral parts of the accompanying financial statements. The principal product lines included in each operating unit are shown in the operating unit segment data.

Sales between operating units were not significant. Inter-area sales, which are sales from one Monsanto location to another Monsanto location in a different world area, were made on a market price basis. Net sales in 1985 of product lines divested that were included in the Chemicals segment were $645 million.

Certain corporate expenses, primarily those related to the overall management of Monsanto, were not allocated to the operating units or geographic areas. Corporate assets principally include certain miscellaneous receivables and investments.

Inter-area sales by entities in each geographic area were:

	Inter-area Sales (Between Monsanto Entities)		
	1987	1986	1985
World area shipped from:			
United States	**$ 624**	$ 527	$ 529
Europe-Africa	**103**	82	163
Canada	**8**	4	5
Latin America	**12**	5	2
Asia-Pacific	**35**	26	21
Inter-area Eliminations	**(782)**	(644)	(720)
Total consolidated	**$ –**	$ –	$ –

Following is a reconciliation of ex-U.S. operating income and total assets to Monsanto's equity in the net income and net assets of consolidated ex-U.S. subsidiaries.

	1987	1986	1985
Operating income	**$ 263**	$ 165	$ 231
Interest expense	**(52)**	(42)	(26)
Interest income	**38**	40	38
Other income — net	**2**	(16)	(21)
Income taxes	**(93)**	(70)	(70)
Net income of consolidated ex-U.S. subsidiaries	**$ 158**	$ 77	$ 152
Total operating assets	**$2,120**	$1,757	$1,670
Total liabilities	**801**	855	847
Net assets of consolidated ex-U.S. subsidiaries	**$1,319**	$ 902	$ 823

FINANCIAL SUMMARY

(Dollars in millions, except per share)	**1987[1]**	1986[2]	1985[3]	1984	1983[4]
Operating Results					
Net Sales	**$7,639**	$6,879	$6,747	$6,691	$6,299
Operating Income (Loss)	**734**	635	(598)	677	521
Income (Loss) Before Extraordinary Gains	**436**	433	(128)	439	369
Net Income (Loss)	**436**	433	(98)	439	402
As a Percent of Net Sales	**6%**	6%	(1)%	7%	6%
As a Percent of Average Shareowners' Equity	**11%**	12%	(3)%	12%	11%
Earnings per Share					
Before Extraordinary Gains	**$ 5.63**	$ 5.55	$(1.67)	$ 5.42	$ 4.48
Net Income (Loss)	**5.63**	5.55	(1.27)	5.42	4.89
Year-end Financial Position					
Total Assets	**$8,455**	$8,269	$8,877	$6,373	$6,427
Working Capital	**1,203**	1,092	899	1,395	1,535
Property, Plant and Equipment					
Gross	**$6,730**	$6,326	$6,840	$6,919	$6,639
Net	**3,076**	2,913	3,034	3,374	3,284
Long-Term Debt	**$1,564**	$1,630	$2,087	$ 824	$ 937
Shareowners' Equity	**3,901**	3,781	3,407	3,634	3,667
Current Ratio	**1.7**	1.6	1.4	2.2	2.3
Percent of Total Debt to Total Capitalization	**35%**	35%	45%	23%	24%
Other Data					
Property, Plant and Equipment Additions	**$ 505**	$ 520	$ 645	$ 614	$ 560
Depreciation and Amortization	**679**	780	599	503	523
Interest Expense	**172**	201	178	100	96
Research and Development Expense	**557**	523	470	370	290
Income Taxes	**237**	203	(170)	268	201
Cash Provided by Operations	**902**	960	535	915	1,040
Stock Price — High	**$100¼**	$ 81½	$ 55⅜	$ 53⅞	$ 58⅛
Low	**57**	44¾	40⅝	40⅝	37⅛
Year-end	**83**	76½	47¾	44	52⅝
Price/Earnings Ratio on Year-end Stock Price	**15**	14	–	8	11
Per Share					
Dividends	**$ 2.75**	$2.575	$ 2.45	$ 2.25	$2.075
Shareowners' Equity	**52.65**	48.69	44.38	46.43	44.83
Shareowners (year-end)	**68,032**	70,367	72,081	71,343	69,787
Shares Outstanding (year-end, in millions)	**74**	78	77	78	82
Employees (year-end)	**49,734**	51,703	56,103	50,754	48,835

(1) Net income for 1987 includes net restructuring income of $18 million ($0.24 per share).

(2) Net income for 1986 includes $85 million ($1.10 per share) of net gains, principally from the sale of the Texas City, Texas, petrochemicals plant and related assets, partially offset by the Electronic Materials asset impairment write-down. In addition, net income was increased $25 million ($0.32 per share) from adopting the requirements of Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions."

(3) Net loss for 1985 includes net restructuring expense of $542 million ($7.04 per share), the gain from the sale of the oil and gas operations of $201 million ($2.61 per share) and an extraordinary gain of $30 million ($0.40 per share) from repayment of debt.

(4) Net income for 1983 includes extraordinary tax benefits of $33 million ($0.41 per share) from the utilization of ex-U.S. loss carryforwards.

BOARD OF DIRECTORS

Richard J. Mahoney
St. Louis
Chairman and Chief Executive Officer,
Monsanto Company
Age: 54 Monsanto Director: 9 years

Marguerite R. Barnett, Ph.D.
St. Louis
Chancellor, University of Missouri-St. Louis
Age: 45 Monsanto Director: less than 1 year

Joan T. Bok
Westborough, Massachusetts
Chairman, New England Electric System
Age: 58 Monsanto Director: 1 year

Donald C. Carroll, Ph.D.
King of Prussia, Pennsylvania
Chairman, Schulco, Inc.
Retired Dean, The Wharton School,
University of Pennsylvania
Age: 57 Monsanto Director: 13 years

C. Raymond Dahl
San Francisco
Retired Chairman and Chief Executive Officer,
Crown Zellerbach Corporation
Age: 66 Monsanto Director: 10 years

Richard I. Fricke
Montpelier, Vermont
Chairman, Executive Committee,
National Life Insurance Company
Age: 65 Monsanto Director: 13 years

John W. Hanley
Palm City, Florida
Chairman, Hanley Hazelden Center
Retired Chairman and Chief Executive Officer,
Monsanto Company
Age: 66 Monsanto Director: 15 years

Earle H. Harbison, Jr.
St. Louis
President and Chief Operating Officer,
Monsanto Company
Age: 59 Monsanto Director: 2 years

Howard M. Love
Pittsburgh
Chairman and Chief Executive Officer,
National Intergroup, Inc.
Age: 57 Monsanto Director: 10 years

Jean Mayer, Ph.D., D.Sc.
Medford, Massachusetts
President, Tufts University
Age: 68 Monsanto Director: 17 years

Buck Mickel
Greenville, South Carolina
Chairman and Chief Executive Officer, R.S.I. Corporation
Retired Vice Chairman, Fluor Corporation, and Chairman,
Daniel International Corporation, a subsidiary of
Fluor Corporation
Age: 62 Monsanto Director: 13 years

John S. Reed
New York
Chairman, Citicorp and Citibank, N.A.
Age: 49 Monsanto Director: 3 years

William D. Ruckelshaus
Seattle
Attorney, Perkins Coie
Former Administrator,
U.S. Environmental Protection Agency
Age: 55 Monsanto Director: 3 years

John B. Slaughter, Ph.D.
College Park, Maryland
Chancellor, University of Maryland at College Park
Former Director, National Science Foundation
Age: 53 Monsanto Director: 5 years

Admiral Stansfield Turner (U.S. Navy, Retired)
McLean, Virginia
Lecturer and Writer
Former Director, U.S. Central Intelligence and
Central Intelligence Agency
Age: 64 Monsanto Director: 7 years

ADVISORY DIRECTORS

Robert L. Berra
St. Louis
Senior Vice President, Administration;
Monsanto Company
Age: 63 Advisory Director: 6 years

Harold J. Corbett
St. Louis
Senior Vice President, Environment, Safety & Health;
Monsanto Company
Age: 60 Advisory Director: 3 years

Robert G. Potter
St. Louis
Group Vice President, Monsanto Company;
President, Monsanto Chemical Company
Age: 48 Advisory Director: 2 years

Nicholas L. Reding
St. Louis
Executive Vice President, Monsanto Company;
President, Monsanto Agricultural Company
Age: 53 Advisory Director: 6 years

Howard A. Schneiderman, Ph.D.
St. Louis
Senior Vice President, Research & Development;
Monsanto Company
Age: 61 Advisory Director: 6 years

Francis A. Stroble
St. Louis
Senior Vice President and Chief Financial Officer;
Monsanto Company
Age: 57 Advisory Director: 6 years

COMMITTEES OF THE BOARD

Audit Committee

Jean Mayer, Ph.D., D.Sc., *Chairman*
Joan T. Bok
Buck Mickel
William D. Ruckelshaus
John B. Slaughter, Ph.D.

Corporate Social Responsibility Committee

Admiral Stansfield Turner, *Chairman*
Jean Mayer, Ph.D., D.Sc.
William D. Ruckelshaus
John B. Slaughter, Ph.D.

Executive Committee

John W. Hanley, *Chairman*
Earle H. Harbison, Jr.
Richard J. Mahoney

Executive Compensation and Development Committee

Howard M. Love, *Chairman*
Richard I. Fricke
John W. Hanley
Buck Mickel

Finance Committee

Donald C. Carroll, Ph.D., *Chairman*
C. Raymond Dahl
John W. Hanley
Richard J. Mahoney
John S. Reed

Nominating Committee

Buck Mickel, *Chairman*
C. Raymond Dahl
Howard M. Love

Pension and Savings Funds Committee

Richard I. Fricke, *Chairman*
Donald C. Carroll, Ph.D.
Earle H. Harbison, Jr.
Admiral Stansfield Turner

OFFICERS

Chairman and Chief Executive Officer

Richard J. Mahoney

President and Chief Operating Officer

Earle H. Harbison, Jr.

Executive Vice President

Nicholas L. Reding

Senior Vice Presidents

Robert L. Berra
Harold J. Corbett
Howard A. Schneiderman, Ph.D.

Senior Vice President and Chief Financial Officer

Francis A. Stroble

Senior Vice President, Secretary and General Counsel

Richard W. Duesenberg

Group Vice President

Robert G. Potter

Vice Presidents

Earl N. Brasfield
Leonard A. Cohn
Stewart D. Daniels
S. Allen Heininger, Ph.D.
Martin J. Kallen
Thomas H. Lafferre
Richard A. Overton
James H. Senger
David L. Sliney

Vice President, Finance

Lawrence B. Skatoff

Vice President and Controller

B. Clare Harris

Treasurer

Juanita H. Hinshaw

SHAREOWNER INFORMATION

Annual Meeting
The next annual meeting of the shareowners of Monsanto Company will be held at 1:45 p.m., Friday, April 22, 1988, in K Building at the Company's World Headquarters, 800 N. Lindbergh Blvd., St. Louis, Missouri. A formal notice of the meeting, together with a proxy statement, is being mailed to each shareowner.

10-K Report,
Corporate Data Book and Investor News
A copy of Monsanto Company's 1987 Form 10-K Report filed with the Securities and Exchange Commission; 1987 Corporate Data Book, which contains additional information relating to Monsanto; and Investor News can be obtained by writing to:

Investor Relations Department
Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, Missouri 63167

Stock Symbol — MTC

Stock Exchanges/Bourses
United States:
New York
Chicago (options)

Europe:
Amsterdam
Brussels
Frankfurt
Geneva
London
Paris
Zurich

Transfer Agent
and Registrar
The First National Bank of Boston
Box 644
Boston, Massachusetts 02102

DSW 021770

Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Missouri 63167

DSW 021771