Monsanto®

1971 ANNUAL REPORT MONSANTO COMPANY

FINANCIAL HIGHLIGHTS

(Dollars in millions, except per share)

	1971	1970	Per Cent Increase Decrease
Net Sales	$2,087.1	$1,971.6	6
Income:			
Before taxes and extraordinary charges	$ 159.4	$ 112.9	41
After taxes:			
Before extraordinary charges	93.7	77.9	20
After extraordinary charges	93.7	66.6	41
Per Common Share:			
Primary earnings:			
Before extraordinary charges	$ 2.65	$ 2.17	22
Extraordinary charges	—	.34	—
After extraordinary charges	2.65	1.83	45
Dividends paid	1.80	1.80	—
Book value	37.16	36.27	3
Depreciation, Depletion, etc.	$ 186.9	$ 170.4(1)	10
Plant Additions and Replacements	$ 205.2	$ 300.8	*32*
Employes	59,271	62,940	*6*
Shareowners — Common Shares	110,490	121,399	*9*

(1) Exclusive of $16.0 applicable to extraordinary charges.

The next annual meeting of the shareowners of the company is to be held at 2:30 p.m. Thursday, March 23, 1972, at the company's General Offices, 800 N. Lindbergh Blvd., St. Louis County, Mo. A formal notice of the meeting, together with a proxy statement and form of proxy, is being mailed to each shareowner.

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TO THE SHAREOWNERS

Earnings from operations rebounded sharply, rising 22 per cent — from \$2.17 per share in 1970 to \$2.65 per share in 1971.

Consolidated net sales, which increased by \$115.5 million or 6 per cent to \$2.09 billion, exceeded the \$2 billion mark for the first time in the company's 70-year history.

Income from operations was \$93.7 million in 1971 and \$77.9 million in 1970. However, an extraordinary charge of \$11.3 million in 1970 reduced that year's net income to \$66.6 million or \$1.83 per share. Nonrecurring charges and credits to income in 1971 were not significant.

Despite weak spots in the world economy, Monsanto had 1971 sales increases in most product lines. Sales beyond U.S. borders, which amounted to \$492 million in 1971, were 5 per cent above their year-earlier total of \$467 million despite softening in Monsanto's European markets — particularly those for nylon and *Acrilan* acrylic fiber, both of which were affected by industry price weakness.

Products making strongest gains included herbicides, man-made fibers, and plastics. On the other hand, notable sales declines occurred in detergent phosphates and silicon. Sales of phosphates fell off as the public, understandably confused by the varying viewpoints reported in the press, pondered the eutrophication problem — which is caused by many products of nature and man, including phosphates. Declining demand for silicon reflected the combined effects of depressed sales of computers and microcircuits, two major markets for the product, and better yields from the semiconductor material by Monsanto customers.

Increasing sales obviously benefitted earnings. Several other factors also were major contributors to the profit advance.

For example, a successful lowering of manufacturing costs resulted in a saving of 35 cents per share. New production units employing improved technology and completed late in 1970 and early in 1971 helped appreciably in this achievement.

In addition, important economies were instituted throughout the company's administrative, marketing and technological activities. A large part of the savings resulted from the elimination of programs of less certain long-term value and from attendant reductions in personnel.

There also was a year-to-year decline in start-up costs, primarily reflecting fewer completions of new production units but also indicating that getting units into operation was less troublesome than in the prior year.

The pattern of 1971 selling prices was not uniform among major product groups. Yet, the over-all price trend indicated a move toward stabilization. The full-year effect of 1970 price declines, however, was to push 1971 average prices lower. In fact, price erosion in 1970 was more damaging to 1971 results than were price reductions initiated in 1971. The product line hurt most by the carry-over effect was fibers. Over-all, price declines cost the company 49 cents per share in 1971.

The year-to-year increase in primary earnings of 48 cents a share is accounted for as follows:

	Earnings a Share			
Year 1970 earnings before extraordinary charges of 34 cents a share........				\$2.17
Additional earnings resulting from:				
Change in sales volume and product mix.......		\$.58		
Lower manufacturing costs..................		.35		
Lower selling, administrative, and technological expenses.......		.33		
Lower start-up costs.....		.15	\$1.41	
Reduction in earnings caused by:				
Lower selling prices......		.49		
Higher raw material prices.................		.13	.62	
Increase in operating results.................			.79	
Other changes in earnings:				
Higher interest charges..	\$.09			
Lower investment tax credit plus other tax items.................	.27	.36		
Higher income credits — net....................		.05	.31	.48
Year 1971 earnings........				\$2.65

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Monsanto's near-term outlook, like that of the entire chemical industry, depends heavily on the economy. Hopefully, an economic upswing will improve the industry's supply-demand balance and bring about a more rational over-all price structure.

In 1971, capital expenditures totalled $205.2 million—down significantly from the $300.8 million spent in 1970. Of the 1971 amount, $144.5 million or 70 per cent was spent in support of domestic operations. The balance was invested abroad, primarily in Europe.

Major U.S. plant additions completed in 1971 included units to produce: oxo-alcohol and phthalic anhydride, both used by Monsanto in making plasticizers for a variety of flexible plastics; formaldehyde for the manufacture of Monsanto resins used in bonding, coating and industrial applications; and *Lustran* ABS plastics for the automotive, appliance and construction markets. In Belgium, a unit was completed to make polyvinyl butyral (PVB) resin for plastic sheet.

U.S. additions scheduled for 1972 completion include units to make: styrene monomer for producing plastics, synthetic rubber and surface coatings; apparel-denier polyester filament; and *Saflex* PVB sheet, interlayer for laminated safety glass. Among European additions to be completed in 1972 are units to manufacture *Saflex* and *Lustran*, both in Belgium, and a plant to produce *Acrilan* acrylic fiber in West Germany.

At the end of 1971, Monsanto's long-term debt of $574.0 million was $64.7 million below the year-earlier level. The decrease reflected a number of 1971 financing decisions.

The company's domestic operations required no new financing in 1971. To provide greater flexibility, however, Monsanto negotiated a short-term credit facility with 16 U.S. banks in the total amount of $180 million. As a part of this program, the company retired approximately $90 million in bank notes that were scheduled to mature over the next several years. At the end of 1971, the full amount of the bank credit was available for Monsanto's use.

It was necessary for the company's overseas subsidiaries to increase outstanding debt. In Belgium and West Germany, where long-term borrowing arrangements had been negotiated previously, subsidiaries made scheduled drawdowns under such loans.

In addition, in July, a wholly owned subsidiary raised approximately $13 million through the public offering of a Swiss franc bond issue which was enthusiastically received.

Despite the year-to-year reduction in outstanding long-term debt, interest expense rose from $32.7 million in 1970 to $38.9 million in 1971. This increase reflected the fact that the large domestic debt issue sold in mid-1970 was outstanding for all of 1971. Based on current projections, interest expense should not increase further in 1972.

As currently projected, no new long-term financing should be required during 1972. The company will continue to draw down, however, under previously arranged loans in Europe to finance construction in Belgium and West Germany.

Legislative and regulatory activity by government at all levels continued to have increasing impact on Monsanto's operations.

The 1971 U.S. wage-price controls and dollar devaluation were among the broadest and most drastic economic moves in recent history. Their full effects on Monsanto are not yet evident. Over-all, however, they are expected to benefit the economy and, therefore, the company. Still, such actions tend to treat only symptoms. It may yet be necessary to come to grips with the basic problem of cost-push inflation, caused primarily by large wage increases unmatched by productivity increases and creating a ripple effect on the economy that benefits neither labor nor industry long-range.

Monsanto has agreed with the U.S. Price Commission that in 1972 the company will not raise its average domestic selling price more than 2 per cent above the base level set by the commission.

The U.S. Revenue Act of 1971 restored the investment tax credit on purchases of new machinery and equipment, provided for further acceleration of depreciation and established guidelines for a new type of export incentive through the creation of domestic international sales corporations (DISC). These tax provisions should increase the level of capital expenditures by industry and serve as an added incentive for export business. If they succeed, they should improve the cost competitiveness of American industry and add to domestic employment. Monsanto, an important exporter, accordingly has established an export company in line with the new DISC provision.

Environmental concerns understandably drew increased attention in 1971. Responding to these concerns, which Monsanto of course shares, continued to require considerable amounts of capital and manpower. In 1971, the company pressed exhaustive testing of sodium nitrilotriacetate (NTA) in an effort to demonstrate its safety as a detergent builder. Monsanto continued its attempts to clarify for the public and for government agencies the relationship between detergent phosphates and eutrophication. The company also further reduced sales of products containing polychlorinated biphenyl (PCB) as part of a continuing effort to keep potential contaminants out of the environment.

Pollution abatement expenditures will accelerate as Monsanto does its part in meeting the requirements of a new federal law on air-pollution control and prepares to meet the standards of a federal water-quality bill which seems certain to be enacted in 1972. Meanwhile, the company continues to work for meaningful legislation and to question legislation that is emotionally or politically motivated.

Although environmental matters are expected to make demands on the company for some time to come, the challenge of cleaning the environment also is expected to create certain opportunities for Monsanto or, more specifically, for wholly owned Monsanto Enviro-Chem Systems, Inc. As emphasis on recycling and resource recovery increases, Enviro-Chem's solid-waste disposal system attracts mounting interest. The system is amenable to existing recycling technology. Several municipalities are evaluating the practicability and economic benefits of the system. At the same time, Enviro-Chem continues to focus its technological capabilities on a number of other systems for controlling pollution of air and water.

Faced by extremely high imports of man-made fiber products, the U.S. government signed agreements with Japan, Taiwan, Korea and Hong Kong to produce moderate slowing of import growth rates. Although limitations have not been set on imports of man-made filament, staple and tow, in fiber form, companies making textiles and apparel will benefit from these agreements, and Monsanto will benefit through the relief afforded its customers.

In September, Monsanto restructured itself to provide a management approach it believes to be particularly well suited to achieving corporate growth and profit goals for the '70s. The restructuring established four worldwide operating companies within Monsanto, each headed by a managing director who sits on the Board of Directors. The new operating units are: Monsanto Commercial Products Company, Monsanto Industrial Chemicals Company, Monsanto Polymers & Petrochemicals Company and Monsanto Textiles Company.

The respective managing directors are: Vice Presidents Tom K. Smith Jr., C. Preston Cunningham, John R. Eck and Louis Fernandez. All four are former general managers of at least one Monsanto division. Mr. Eck has been a Monsanto director since 1969. The others were elected to the board at the time of the reorganization, as was Vice President Anthony J. A. Bryan, general manager of the International Division.

Product responsibilities were assigned to the new companies in a way designed to serve markets most efficiently and effectively. Each operating company has a high degree of delegated line and staff authority, affording independence and flexibility in dealing with changing market situations. The new structure enables the companies to react quickly to day-to-day problems, leaving corporate management freer to concentrate on long-term planning. Additionally, as members of Monsanto's board, managing directors are effective contributors to over-all planning.

In 1971, a year in which the importance of the Agricultural Division continued to increase, the division's general manager, Edmond S. Bauer, was elected a corporate vice president. Also in 1971, the company further strengthened its financial capabilities. Kenneth N. Kermes, former assistant treasurer of General Foods Corporation, was elected Monsanto's treasurer; and Richard C. O'Sullivan, former vice president and controller of Textron, Inc., was elected the company's controller.

We especially want to stress our keen awareness of the ability, spirit, loyalty and dedication of our employes. Particularly during 1971, it was obvious that the men and women of Monsanto were a dominant asset. Thus, we are eager to report to shareowners the immense pride we have in our people.

Sincerely,

Charles H. Sommer

Chairman of the Board

Edward J. Bock

President

St. Louis
Feb. 18, 1972

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1971 OPERATIONAL HIGHLIGHTS

To aid year-to-year comparisons, the traditional product groups have been retained in preparing the sales figures in the table at the bottom of this page. In the performance review that follows, however, products are discussed under the companies to which they were assigned in the 1971 Monsanto reorganization. In future years, product categories will be realigned for reporting purposes to reflect more accurately the new structure.

MONSANTO COMMERCIAL PRODUCTS COMPANY

Sales of products marketed by this basically end-user-oriented Monsanto company reached $511 million, representing a year-to-year increase of 6 per cent, even though the 1970 sales base includes certain operations since discontinued.

Chemicals for agriculture, sales of which rose slightly, were major contributors to the year's improved earnings. The modest sales increase occurred despite the elimination of certain products, including diammonium phosphate fertilizer, and the disposal of certain agricultural product distribution centers no longer compatible with long-range objectives.

Continuing operations showed sales gains, with advances in crop protection chemicals particularly gratifying. Sales in all product lines for agriculture increased, including those fertilizers marketed in both 1970 and 1971.

Use of *Lasso* herbicide gained strongly among growers of corn, soybeans, peanuts and cotton. Expanded clearances, permitting its use in combination with other weed killers, broadened the product's versatility and application. Also helping 1971 sales of *Lasso* were increased corn acreage, favorable weather through most of the planting season, and expectations of high crop prices. Monsanto's capacity to produce *Lasso* was expanded.

Other crop protection chemicals with increased sales included *Ramrod* herbicide (for corn and sorghum), parathion insect killers and, in Latin America and the Asia-Pacific area, *Machete* herbicide (for rice).

The global wheat glut of 1970 carried into 1971, limiting sales of *Avadex* and *Avadex* BW wild oat killers in Australia and Canada. But both products sold well in Europe, as did *Lasso* and *Ramrod.* Gains in Eastern Europe were especially strong.

Looking to expanding European markets, Monsanto established both a herbicide granulation

CONSOLIDATED SALES BY PRODUCT GROUPS

(Dollars in millions)

	1971	1970	Per Cent Increase *Decrease*	Per Cent of Total 1971	Per Cent of Total 1970
Plastics, Resins and Coatings	$ 486.7	$ 446.6	9.0%	23.3%	22.6%
Man-Made Fibers	479.7	442.9	8.3	23.0	22.5
Products for Agriculture	202.7	201.6	.5	9.7	10.2
Phosphates and Detergents	183.9	191.6	*4.0*	8.8	9.7
Intermediates, Plasticizers and Functional Fluids	173.2	163.8	5.7	8.3	8.3
Electronics and Process Controls	125.0	122.5	2.0	6.0	6.2
Petroleum Products	116.3	104.3	11.5	5.6	5.3
Rubber and Oil Chemicals	107.2	102.4	4.7	5.2	5.2
Food Ingredients and Fine Chemicals	58.8	59.2	*.7*	2.8	3.0
Textile and Paper Chemicals	52.6	51.3	2.5	2.5	2.6
Heavy Chemicals	31.5	32.7	*3.7*	1.5	1.7
Other Products	69.5	52.7	31.9	3.3	2.7
Total	$2,087.1	$1,971.6	5.9%	100.0%	100.0%

unit and an agricultural testing laboratory in Belgium.

Sales of hybrid breeding swine by wholly owned Farmers Hybrid Companies, Inc., were adversely affected by low pork prices at the farm level. Expanding its genetic research to cattle, Farmers Hybrid bought acreage in Oklahoma for a 2,500-head research herd.

Fertilizer materials accounted for less than 2 per cent of consolidated corporate sales during the year. By design, Monsanto's fertilizer operations have been cut back significantly to dispose of substantial but relatively unprofitable sales volume. This streamlining of operations, including discontinuance of diammonium phosphate fertilizer production, along with cost reductions and increasing price stability, has resulted in an improved level of profitability.

In fabricated plastic products, sales of bottles for such large-volume markets as household chemicals, toiletries and pharmaceuticals were near the 1970 level. Demand slipped in the first half but rose late in the year. Selling prices strengthened somewhat.

Also in 1971, Monsanto opened a bottle plant in Lima, Ohio; expanded its line of stock bottles; and introduced a line of bottle closures that are difficult for small children to remove.

Sales of vending cups, margarine tubs, meat trays and packaging materials continued to gain. Product introductions included colored trays for retail marketing of fish, poultry and red meats; and an improved insulated vending cup for drinks.

Other fabricated plastic products showing year-to-year sales increases included polyethylene film for agriculture and construction; and *Fome-Cor* insulation board, used mainly as sub-roof and sidewall sheathing for mobile homes.

Continued and substantial progress was made in developing the first effective plastic bottle for carbonated beverages. In August, The Coca-Cola Company concluded a favorable market test spanning more than a year, during which three million "Cokes" were sold in Monsanto's 10-ounce Lopac bottles. Further progress included Monsanto's development of a 32-ounce Lopac bottle, as well as bottles considerably lighter than earlier products and having improved shatter resistance. Additional market testing by The Coca-Cola Company involving the new bottle is scheduled for 1972.

In 1971, the nonpolluting burnability and the excellent recyclability of Lopac were conclusively demonstrated. Environmental considerations are paramount in Monsanto's testing and development of these plastic containers.

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Sales of electronic products were 11 per cent below the 1970 level. This was primarily due to softness in computer and microelectronics markets, which hurt sales of silicon for semiconductors, integrated circuits and semiconductor memories. Achievement of better manufacturing yields from silicon by Monsanto customers also contributed to the decline.

Sales of III-V electronic materials gained, however, as did sales of solid-state light emitters and related products. In 1971, Monsanto became the first company to introduce light-emitting diodes in colors other than red for use in the optoelectronics industry.

Wholly owned Fisher Controls Company, Inc., moved its sophisticated process control valves and related equipment in record sales volume, despite the restraining influences of reduced capital spending in many of the industries it serves.

In 1971, Fisher introduced a line of advanced digital control systems and saw its previously introduced analog process controllers continue to gain new market acceptance. Addition of the two lines enhances Fisher's capability to provide electronic control-loop systems to meet the needs of industry.

Late in the year, Fisher began manufacturing analog and digital control equipment in the United Kingdom for marketing there and on the Continent.

Monsanto Enviro-Chem Systems, Inc., another subsidiary, completed its second full year of operation with new gains. Sales of its *Brink* mist eliminators rose substantially. Clients for its wastewater technical study services also increased in 1971.

Also in 1971, Enviro-Chem received contracts to build sewage-treatment plants in East Hartford and Rocky Hill, Conn. Its pyrolysis system for disposing of solid wastes is being considered for installation by several municipalities. The subsidiary continued as a world leader in the design and construction of sulfuric acid plants. And sales of its replacement vanadium catalyst for acid manufacture were higher than ever.

MONSANTO INDUSTRIAL CHEMICALS COMPANY

Modest improvement in the U.S. economy failed to produce appreciably higher demand for industrial chemicals, Monsanto's sales of which rose only slightly to $546 million in 1971, from $540 million in 1970.

Total sales of phosphates and detergents dipped 4 per cent. Although sales of phosphates for foods,

COMPARATIVE CONSOLIDATED SALES, INCOME AND EARNINGS A SHARE, ON A QUARTERLY BASIS

(Dollars in millions, except per share)

	1971	1970	Per Cent Increase *Decrease*
Sales:			
First quarter	$ 542.3	$ 512.7	5.8%
Second quarter	539.8	523.4	3.1
Third quarter	506.0	466.9	8.4
Fourth quarter	499.0	468.6	6.5
	$2,087.1	$1,971.6	5.9
Income before extraordinary charges:			
First quarter	$ 30.5	$ 33.0	*7.6%*
Second quarter	30.5	27.7	10.1
Third quarter	16.6	11.0	50.9
Fourth quarter	16.1	6.2	159.7
	93.7	77.9	20.3
Extraordinary charges	—	11.3	—
Net income	$ 93.7	$ 66.6	40.7
Primary earnings a share:			
Before extraordinary charges:			
First quarter	$ .87	$ .95	
Second quarter	.88	.79	
Third quarter	.46	.28	
Fourth quarter	.44	.15	
	2.65	2.17	
Extraordinary charges	—	.34(1)	
	$2.65	$1.83	

(1) By quarters — First, 5 cents; fourth, 29 cents.

COMPUTATION OF EARNINGS A COMMON SHARE

(In millions, except per share)

	1971	1970
Common shares:		
Issued	33.1	33.1
Held in treasury	.3	.3
Outstanding	32.8	32.8
Income before extraordinary charges	$93.7	$77.9
Dividends on preferred shares	6.4	6.4
Available for common shares	87.3	71.5
Adjusted to primary basis:		
Common shares	33.3	33.3
Income before extraordinary charges	$88.1	$72.3
Earnings a share	2.65	2.17
Adjusted to fully diluted basis:		
Common shares	36.2	36.2
Income before extraordinary charges	$95.1	$79.2
Earnings a share	2.63	2.17(1)

(1) Fully diluted earnings a share for 1970, because of the anti-dilution provision of Opinion Number 15 of the Accounting Principles Board, are shown in an amount not in excess of primary earnings a share.

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dentifrices and industrial uses rose, these gains were more than offset by a 10 per cent decline in sales of detergent phosphates.

To maintain its place as a major supplier to the detergent industry, Monsanto seeks effective new synthetic raw materials for laundry detergents and bar soaps. In 1971, Monsanto, in conjunction with detergent manufacturers, continued its extensive testing to qualify sodium nitrilotriacetate (NTA) as an acceptable detergent raw material. The product has been withdrawn from the market pending tests to determine its complete safety. All studies completed by Monsanto show NTA to be biologically and environmentally safe as an effective partial substitute for detergent phosphates.

As a result of these and other tests, Monsanto hopes all doubt about the safety of NTA will be removed and the product will be cleared by the U.S. government for detergent use.

Meanwhile, Monsanto believes phosphates are the safest — especially for human beings — and the most effective detergent builders available. The company is convinced that eutrophication will not be measurably reduced by removal of phosphates from detergents. The company also believes the problem is limited geographically and can be solved best with known technology in sewage-treatment plants.

Monsanto completed a multimillion-dollar unit to make phosphoric acid for a variety of industrial uses in 1971. The replacement unit, most modern of its kind anywhere, implements the latest technology in production capability and pollution control.

Demand for *ACL* chlorine-carrying compounds for treating swimming pools remained strong. *ACL* is also used in laundry bleaches, dishwashing compounds and sanitizing agents.

Sales of intermediates, plasticizers and functional fluids were up 6 per cent.

Plasticizer selling prices continued soft, although sales rose. Vinyl chloride production, upon which much of Monsanto's plasticizer business depends, was relatively slow in early 1971 but turned sharply upward late in the year, indicating a resumption of more normal growth rates.

Used to impart flexibility, fire-resistance and other desirable properties to plastics, Monsanto's plasticizers continue as pacesetters in their field. New government regulations requiring fire-safe materials in automobiles and certain home furnishings are expected to help increase sales of specialty plasticizers such as Monsanto's phosphate esters. Two phosphate ester plants which went on-stream late in 1970 will help satisfy the expected new demand.

A new unit for producing *Santicizer* 711 plasticizer was brought on-stream in early 1971. This largest ester unit in the United States, along with another new unit to produce linear oxo-alcohol raw materials and a new phthalic anhydride unit started up in late 1970, solidifies Monsanto's position as a leading plasticizer manufacturer.

Monsanto continued phasing out certain products containing polychlorinated biphenyl (PCB). This voluntary program was in response to concern over PCB's persistence in the environment and its possible effect on certain ecosystems.

In certain closed-system electrical transformers and capacitors — components essential to power distribution — no acceptable replacement is presently known. PCB products afford unique dielectric properties and an especially effective technique for protecting against fire and explosion due to possible failures in this type of equipment. The search for suitable alternate products for all current PCB applications is a high-priority Monsanto undertaking.

Sales of rubber chemicals rose. Significant growth in the European rubber industry in early 1971 and an economic upturn in the United States late in the year were primary reasons for the over-all improvement.

At year's end, rubber chemicals expansions neared completion in Australia and the United Kingdom. A multimillion-dollar expansion in Belgium made Monsanto the first major supplier to produce accelerators and antidegradants for tire making both on the Continent and in the United Kingdom. The company now serves the tire industry from plants in seven countries.

Sales of food ingredients and fine chemicals gained slightly.

In 1971, demand for vanillin as a food ingredient rose. Use of vanillin in pharmaceutical production declined, however, as major customers worked off large inventories.

The fragrance market still grows. In 1971, construction began on a new aroma chemicals plant to provide Monsanto Flavor/Essence, Inc. (the subsidiary formerly called George Lueders & Co., Inc.) with greater fragrance capacity. Late in the year, Monsanto researchers achieved a technical breakthrough by duplicating natural processes for preparing two amino acids by direct chemical synthesis. Such acids are used in fragrances, flavors, pharmaceuticals and nutrients.

In the textile and paper chemicals market, Monsanto introduced a durable fire-retardant system for paper, cotton, rayon and other cellulosic materials. The system can be applied to the manufacture of carpets and rugs. Procedures are being developed to extend its use to children's nightwear.

Monsanto also introduced a new family of latex binders based on ethylene and vinyl chloride. Such binders have applications in textiles, wall coverings, paper, paints, printing inks and industrial finishes.

MONSANTO POLYMERS & PETROCHEMICALS COMPANY

Sales of products marketed by this operating unit increased 8 per cent to $531 million. Gains were worldwide despite some softness in European markets late in the year.

Strong gains in plastics and resins led the way to a 9 per cent over-all sales increase in the plastics product group, which also includes the fabricated products discussed earlier. Recovery of plastics growth in the United States and continued high consumption levels elsewhere helped total performance. Prices were relatively stable.

Demand for *Lustran* ABS plastic was up sharply. Sales of the tough, specialized plastic to makers of automobiles and appliances gained especially well. Increased 1971 housing starts and favorable new building codes helped boost use of ABS pipe. And *Lustran* solidified its position of leadership in plated plastic components.

To meet swelling demand, Monsanto expanded its ABS capacity in the United States. A Japanese associate also increased its ABS capacity in 1971. Meanwhile, in Belgium, work continued on a unit that in 1972 will start producing ABS at an annual rate of up to 110 million pounds.

Sales of *Lustrex* polystyrene — used mainly in packages, housewares and appliances — also rose. Expansions in Argentina and France lifted

MAJOR OPERATING COSTS

(Dollars in millions)

	1971	1970
Raw Materials-Purchased	$563.0	$503.9
Wages and Salaries	527.2	518.7
Employe Benefits	73.0	71.3
Energy and Other Utilities	94.5	86.9

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Monsanto's total polystyrene capacity to almost one billion pounds a year. A new affiliate in Israel began work on that country's first polystyrene plant. Completion is scheduled for late in 1972.

Polyethylene sales were close to the year-earlier level. New high-density grades of the plastic for producing housewares, shipping containers and packaging film were introduced.

Sales of nylon plastic rose substantially, due primarily to its increased use in automotive parts. A unique, fire-retardant nylon molding resin was developed to meet increasingly stringent requirements of the appliance and electronics fields.

Sales of *Saflex* polyvinyl butyral (PVB) sheet, used in laminated safety glass, rose as North American auto makers had a strong year-to-year improvement and experienced no major strikes. A domestic replacement unit to make PVB sheet neared completion at year's end. In Belgium, work continued on a 60 per cent expansion of PVB sheet capacity, and a unit to produce PVB resins came on-stream.

Sales of resins for a variety of industrial uses increased. Rising domestic housing starts helped sales of phenolic resins for bonding plywood and thermal insulation. Acrylic multipolymer resins continued to be well accepted in adhesives and reprographic applications.

Over-all demand for surface coating resins was higher as sales of styrene allyl alcohol for industrial coatings gained. A new unit to make the specialized resin is scheduled for 1972 start-up.

Despite softness in markets for petrochemicals, sales of these basic products stayed about the same. Smooth operation of several production units installed in 1970 contributed to increased product availability and improved costs in 1971.

Sales of methanol and acetic acid were up sharply as new manufacturing units in Texas City completed their first full year of operation. The products are used in the production of resins, fibers and chemicals.

An expanded phenol unit also operated for its first full year near Alvin, Tex. And a unit capable of turning out 150 million pounds of formaldehyde annually underwent successful start-up there.

Sales of phenol — used to make resins, pharmaceuticals and other products — increased considerably.

In Spain, a unit was installed to supply ethylene dichloride for expanded vinyl chloride production there. These projects of a 50 per cent owned associate company represent Spain's first production of petrochemical-based vinyl chloride, used to make vinyl plastics.

Sales of styrene monomer approximated their 1970 level. Work continued on Monsanto's new monomer unit in Texas City, which is to have a capacity of 1.3 billion pounds annually. When completed early in 1972, this unit will replace an older one with annual capacity of 800 million pounds. Late in the year, an affiliate in the United Kingdom put on-stream a new styrene monomer unit based on improved Monsanto technology.

Sales of acrylonitrile, used chiefly to make fibers and plastics, increased. A new acrylonitrile plant in the United Kingdom helped extend Monsanto's market penetration there.

In 1971 raw materials for petrochemical manufacture continued to be much more costly to U.S. producers than to producers in other countries. Recent proposals by the U.S. government for new petrochemical feedstock import rules recognize this inequity. If adopted, these rules will enhance Monsanto's competitive position in many world markets.

Demand for petroleum products stayed strong as sales increased 12 per cent.

U.S. sales of gasoline increased substantially in 1971, although 1970 price boosts on retail products gave ground late in the year. Conversion of most *Lion* service stations to regional, independent-style marketing was completed. This style of operation, which is popular with price-oriented consumers, helped expand gasoline sales through branded outlets.

Although production of crude oil and natural gas declined somewhat, higher prices increased sales revenue. Exploration for hydrocarbon reserves continued in several world areas. A deep well completed late in the year in west Texas added to Monsanto's natural gas reserves. However, combined oil and gas reserves declined slightly.

OPERATING MARGINS

	As a Per Cent of Sales 1971	1970
Gross Profit	22.7%	22.6%
Selling and Administrative Expenses	10.0	11.1
Technological Expenses	4.1	5.0
Income Before Extraordinary Charges:		
Before income taxes	7.6	5.7
After income taxes	4.5	4.0

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MONSANTO TEXTILES COMPANY

Monsanto's sales of man-made fibers amounted to $480 million, 8 per cent above the 1970 level.

The improvement reflected recovery in apparel and carpet markets. Gains were particularly strong in apparel, where a sharp upturn in consumption of synthetic textiles enabled Monsanto to achieve a 19 per cent year-to-year increase in pound shipments of fiber for apparel manufacture.

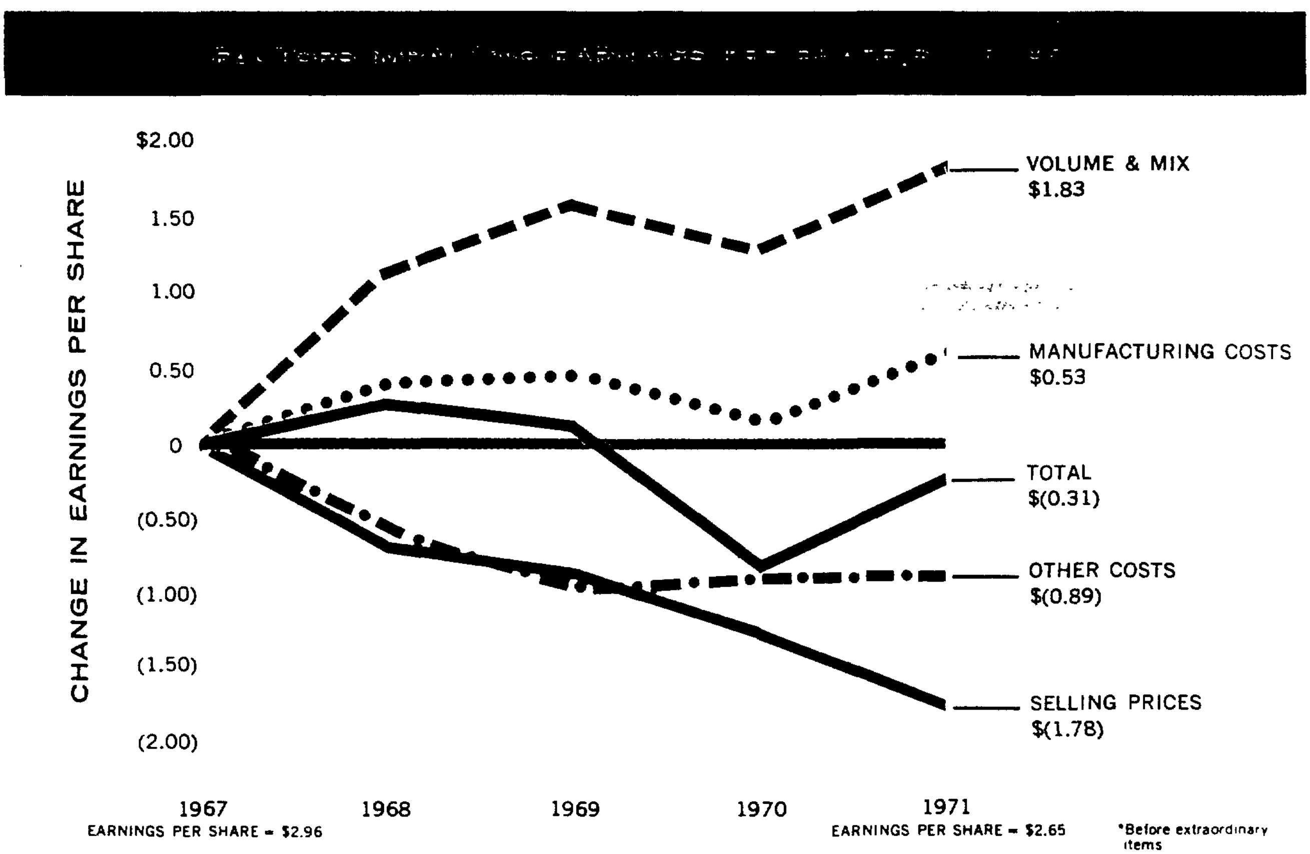
Domestic price erosion again had an adverse effect, as price cuts that occurred late in 1970 restricted year-to-year improvement. Yet, the 1971 trend was toward price stability.

Acceptance of new fashions and restored buying confidence brought stability to markets for women's wear. Simultaneously, there was increasing acceptance of new men's fashions, particularly in leisure wear and knits.

Sales of Monsanto's nylon yarns benefitted in 1971 from major gains in markets for lingerie and women's knitted outerwear. The company's position in the women's hosiery and pantyhose market was enhanced by a new textured nylon sold under Monsanto's *Actionwear* trademark. *Acrilan* acrylic fiber gained additional popularity in the rapidly growing area of single-knit and double-knit apparel fabrics, and in yarns for hand knitting. New *Acrilan* fibers were well received for use in the manufacture of synthetic furs. The company's *Spectran* polyester fiber won increased acceptance in the men's half-hose market. And blends of *Spectran* and *Acrilan* showed considerable promise for use in double knits.

Accelerated housing starts, along with improving consumer confidence, resulted in sales gains for all carpet fibers. Nylon benefitted especially from improved market conditions, while *Acrilan* continued to be the preferred acrylic fiber for floor coverings. Developmental work on *Cadon* nylon staple fiber for durable, antistatic carpets was successfully completed. *Cadon* could become significant commercially in 1972 and beyond.

In 1971, Monsanto introduced improved *Acrilan* acrylic carpet fibers having better flame-retardant properties in compliance with new government flammability standards. And to strengthen Monsanto's long-term position with respect to other flammability regulations covering an increasing number of textile products, the company developed a special mod-



acrylic fiber. Tests of this new fiber indicate flame-retardant properties superior to those of competitive products. Potential commercial applications include children's sleepwear, blankets and drapery fabrics.

The highly successful *Wear-Dated* program, under which the quality of apparel and certain home furnishings made from Monsanto's fibers is guaranteed, entered its second decade. The guarantee program, broadest in the textiles industry, has proven an effective precursor to company involvement in the growing consumerism movement.

In 1970, Monsanto established itself as a supplier of *Elura* modacrylic fiber to several manufacturers of quality hairpieces. In 1971, following a period of spectacular growth, U.S. wig sales fell off sharply. Increased imports of wigs and wig fibers from the Far East, coupled with the declining demand, adversely affected efforts to sell substantial quantities of *Elura* during the year.

Demand for Monsanto's high-tenacity nylon tire yarn stayed strong, as nylon continued to be the preferred reinforcing material in tires for trucks, airplanes and farm vehicles. As polyester was used increasingly in automobile tires, Monsanto's new polyester tire yarn unit began supplying material to several major tire companies.

There was major progress in developing advanced technology for producing nylon and polyester filament yarns at the plant being built in the Sand Mountain area of Alabama. Start-up there early in 1972 will mark Monsanto's first manufacture of polyester filament for apparel, fastest growing of all man-made fibers.

Capacity for *Acrilan* was expanded in Northern Ireland. Construction began on a plant to make *Acrilan* in Lingen, West Germany. Scheduled for completion in late 1972, the latter unit will serve the expanding needs of the Common Market.

Domestically, a unit to produce textured nylon hosiery yarn was installed at Pensacola, Fla.

RESEARCH AND DEVELOPMENT

In line with the company's over-all program to reduce nonmanufacturing costs, research and development projects throughout Monsanto were scrutinized, and efforts were concentrated on those projects most likely to pay off in new products, new processes and improved operation of those businesses which best fit corporate objectives. The preceding discussion of operating-company activities repeatedly highlights the results of some of this effort.

Expenditures for technological activities, including such activities conducted by the operating companies themselves, totalled \$86.7 million in 1971, compared to \$98.1 million in 1970. The 1971 figure represents 4.1 per cent of sales, compared to 5.0 per cent for the previous year. During the year, 507 U.S. patents were received, plus 1,084 from other countries.

The Corporate Research Department (CRD) devoted its efforts primarily to those areas which were of interest to one or more existing businesses, but at a more fundamental level than that engaged in by the operating companies.

In the area of pollution control, Monsanto's auto-exhaust catalyst system is a joint effort of CRD and the New Enterprise Division (NED), which directs the company's growth into new fields. The catalyst is one of several contenders for the job of meeting exhaust standards set by the U.S. Environmental Protection Agency.

NED also concentrated on three other major areas of opportunity in 1971: man-made surfaces for sports and general use; nonwoven fabrics, and steel and other metal fibers.

The division's *AstroTurf* recreational surfaces are already well known in the United States, Canada and Europe. In 1971, a sales force was established to increase retail penetration of the product line in 1972. Planned for 20 key areas was a " 'Round-the-Home" promotional campaign aimed at the do-it-yourself market.

Monsanto's nonwoven fabric, *Cerex* spunbonded nylon, penetrated new markets in 1971. Upward price movements in cotton and jute, with which *Cerex* competes, are expected to benefit sales of the Monsanto product in 1972.

Technical progress on Spunwire steel fiber continued. Concentration was on the tire market, in which large-volume use of steel by 1975 seems assured. Monsanto hopes its product will be a prime candidate for application to this field.

Additionally, the New Enterprise Division supports long-range business development programs and includes a group building a store of basic knowledge in the area of life sciences, another field which could offer new opportunities.

Technological problems of concern to both Monsanto and the U.S. government received major attention. The pollution control group at the Dayton, Ohio, laboratory of wholly owned Monsanto Research Corporation (MRC) was in fact commended by the government for its field evaluation of instruments for monitoring emissions from power-plant stacks.

Additionally, in cooperation with Monsanto Enviro-Chem Systems, Inc. (also wholly owned), the research subsidiary provided baseline information on pollutant emissions in several industries, and developed new, sensitive pollution measuring techniques and instruments.

Monsanto's electronics technology was further advanced by cooperative research work by MRC in Dayton and the parent company in St. Louis. Methods were developed for producing highly refined semiconductor materials. And high-performance solid-state devices were built for use in radars, light-emitting displays and spacecraft systems.

MRC continued operating Mound Laboratory at Miamisburg, Ohio, for the U.S. Atomic Energy Commission. Components such as timers, transducers, detonators and radioisotopic-fueled heat sources are manufactured there. Heat sources made at Mound and launched with Apollos 14 and 15 provided power for the scientific equipment which astronauts left on the moon in 1971. And a new heat source containing a ceramic fuel form of plutonium-238 was processed for the Jupiter flyby mission scheduled for launch early in 1972.

The company's engineering department continued to manage the bulk of Monsanto's capital additions program. Faced with continuing inflation and sharply rising construction costs, Monsanto continued to focus its engineering technology on making optimum use of capital to achieve improved manufacturing processes designed to operate at minimum cost.

BUSINESS ABROAD

Overseas sales increased 5 per cent despite economic slowdown in Europe, where sales of $270 million were up only slightly. Larger sales increases occurred in Canada, Latin America and the Asia-Pacific area.

In Europe, modest gains failed to offset rising production costs and declining selling prices, especially in a soft fiber market.

Monsanto's capital expenditures abroad amounted to $60.7 million in 1971.

In Mexico, Monsanto Mexicana S.A. was merged with Resistol S.A., a Mexican chemical producer, to form Industrias Resistol S.A. The merger and resultant distribution of equities in the new company achieved Mexicanization of the former Monsanto subsidiary in compliance with Mexico's policy of limiting non-Mexican ownership of certain types of companies. Monsanto's equity in the new company is about 36 per cent.

Although economic and political uncertainties pervade the international scene, the long-term outlook for growth of Monsanto's businesses is favorable. Currency revaluations and export incentives should make U.S. exports more competitive. And considering the company's well established position in Europe, the emergence of an enlarged European

OPERATIONS OUTSIDE THE UNITED STATES

(Dollars in millions)

	Sales		Gross Plant Property	
	1971	1970	1971	1970
Europe	$270	$265	$376	$327
Canada and Latin America	153	138	44	57
Pacific and other	69	64	34	33
Total	$492	$467	$454	$417
Fibers	$126	$119	$219	$195
Plastics, Resins and Coatings	168	154	103	102
Chemicals and other	198	194	132	120
Total	$492	$467	$454	$417
Exports from the United States	$120	$120		
Manufactured outside the United States	372	347		
Total	$492	$467		

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Economic Community should create additional commercial opportunities for Monsanto there.

To help take advantage of existing and anticipated opportunities abroad, Monsanto's European activities have been reorganized in line with 1971's corporate restructuring.

International operations are now structured to serve world markets with a broad line of products, some made locally and others exported from the United States. The company's overseas manufacture continues to be sold primarily into overseas markets. This arrangement enables maximum participation in the international marketplace, while cushioning Monsanto's earnings against the effects of cyclical fluctuations among national economies.

MONSANTO'S PROGRAM TO CONTROL POLLUTION

In 1971, Monsanto pressed forward with continuing programs to combat pollution at its U.S. plants. In the United States, a total of $34.7 million was spent to control pollution. Of this amount, $12.3 million went for capital projects and $22.4 million went for operation and maintenance. Additional amounts were spent for pollution abatement overseas.

Monsanto has a long-term commitment to help clean the environment. During the next three years, the company plans to spend $60 million on capital investments for pollution-control projects, excluding operating costs.

Many new federal, state and local laws and regulations concerning manufacturing's effects on the environment were under public discussion in 1971. Monsanto representatives continue to support pollution-control proposals that are technologically feasible and responsive to real needs. In situations where suggested laws are of questionable merit, more realistic measures are sought.

In 1971, Monsanto strengthened its procedures to evaluate the environmental impact of new manufacturing processes, new products, and significant new end uses of traditional products. Positive assessments were established as prerequisites for utilization or commercialization.

PERSONNEL

In a continuing effort to enhance profitability, Monsanto disposed of certain businesses and eliminated certain activities of marginal long-term value. One result was a year-to-year reduction in personnel of approximately 6 per cent. Monsanto had 59,271 employes on Dec. 31, 1971, compared to 62,940 employes a year earlier.

While endeavoring to relocate employes within the company, Monsanto also organized an effective placement program to assist terminated personnel in finding positions with other organizations. More than 50 per cent of the professional employes availing themselves of this special program were placed with other companies during the year.

Recruiting on college campuses was modified in line with reduced needs for new manpower. At the same time, Monsanto continued to maintain favorable relations with colleges and universities by providing financial support for qualified students, faculty members and departmental operations.

In response to employe needs and the competitive requirements of the labor market, Monsanto instituted new or revised employe benefit programs at several domestic and overseas locations.

No provision for employes' bonus was made in 1971, nor were any bonus awards made for the year. This was also true for 1970. The company's bonus plan is based on levels of profitability which require a stated return on invested capital before any amount is set aside for bonuses. The 1970 and 1971 profitability levels were not high enough to generate a bonus reserve.

Twelve labor contracts were negotiated in the year. Work stoppages occurred in only two cases, the more serious of which was a 15-day strike at the Carondelet plant in St. Louis. Six of the new contracts are for three-year terms; two are for two years; and the others are one-year agreements.

Continuing emphasis on accident prevention helped minimize the rate of disabling injuries to Monsanto employes worldwide. At the company's domestic locations, the frequency of disabling injuries was less than one-tenth the U.S. chemical industry average, as reported by the Bureau of Labor Statistics.

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STATEMENT OF CONSOLIDATED INCOME

(Dollars in millions, except per share)

	Year 1971	Year 1970	Increase *Decrease*
Net Sales	$2,087.1	$1,971.6	$ 115.5
Cost of Goods Sold	1,614.3	1,526.4	87.9
Gross Profit	472.8	445.2	27.6
Less:			
Selling and administrative expenses	208.2	218.9	*10.7*
Technological expenses	86.7	98.1	*11.4*
	294.9	317.0	*22.1*
Operating Profit	177.9	128.2	49.7
Income Charges (Credits):			
Interest expense	38.9	32.7	6.2
Other — net	(20.4)	(17.4)	3.0
	18.5	15.3	3.2
Income Before Income Taxes	159.4	112.9	46.5
Provision for Income Taxes:			
Current	69.4	35.4	34.0
Deferred (credit)	(3.7)	(.4)	3.3
	65.7	35.0	30.7
Income Before Extraordinary Charges	93.7	77.9	15.8
Extraordinary Charges — Net, Less Applicable Income Taxes of $10.6	—	11.3	*11.3*
Net Income	$ 93.7	$ 66.6	$ 27.1
Earnings a Common Share Based on Weighted Average Number of Shares Outstanding:			
Primary:			
Before extraordinary charges	$2.65	$2.17	$.48
After extraordinary charges	2.65	1.83	.82
Fully diluted:			
Before extraordinary charges	2.63	2.17	.46
After extraordinary charges	2.63	1.83	.80

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The above statement should be read in conjunction with pages 17 through 20 of this report.

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STATEMENT OF CONSOLIDATED FINANCIAL POSITION

(Dollars in millions, except per share)

ASSETS

	December 31, 1971	December 31, 1970
Current Assets:		
Cash	$ 34.2	$ 28.9
Marketable securities, at cost which approximates market	40.4	50.9
Receivables, less allowances	402.9	383.1
Inventories	395.4	392.1
	872.9	855.0
Investments and Miscellaneous Assets, at Cost or Less:		
Investment in and advances to associates	16.0	15.0
Miscellaneous investments and receivables	54.1	64.5
	70.1	79.5
Property, Plant and Equipment, at Cost:		
Land	32.4	30.5
Buildings	408.4	397.2
Machinery and equipment	2,172.5	2,083.5
Phosphate deposits	12.1	12.1
Oil and gas properties	109.7	113.4
	2,735.1	2,636.7
Less accumulated depreciation and depletion, etc.	1,564.8	1,466.8
Net property	1,170.3	1,169.9
Deferred Charges	40.2	40.3
	$2,153.5	$2,144.7

LIABILITIES

	December 31, 1971	December 31, 1970
Current Liabilities:		
Accounts payable and accruals	$ 247.2	$ 249.5
Income taxes	63.3	18.2
Current portion of long-term debt	15.8	49.4
	326.3	317.1
Long-Term Debt — Less Current Portion Above	558.2	589.3
Other Liabilities and Deferred Credits:		
Deferred income taxes	27.5	31.2
Miscellaneous	12.9	10.4
	40.4	41.6
Minority Interests in Subsidiary Companies	2.9	2.5
Shareowners' Equity:		
Preferred stock — authorized, 10,000,000 shares without par value, issuable in series; outstanding, 2,320,410 shares in 1971 and 2,313,910 shares in 1970	5.2	5.2
Common stock — authorized, 50,000,000 shares, par value $2 each; issued, 33,155,500 shares in 1971 and 33,088,362 shares in 1970	66.3	66.2
Paid-in surplus	586.5	583.5
Retained earnings	580.2	551.6
	1,238.2	1,206.5
Less common stock in treasury, at cost (306,543 shares in 1971 and 301,741 shares in 1970)	12.5	12.3
	1,225.7	1,194.2
	$2,153.5	$2,144.7

The above statement should be read in conjunction with pages 17 through 20 of this report.

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STATEMENT OF CHANGES IN CONSOLIDATED FINANCIAL POSITION

(Dollars in millions)

	Year 1971	Year 1970
Source of Working Capital:		
Income before extraordinary items	$ 93.7	$ 77.9
Add — Expenses not requiring outlay of working capital:		
Depreciation, depletion, etc.	186.9	170.4
Working capital provided from operations, exclusive of extraordinary items	280.6	248.3
Extraordinary charges — net, net of tax		(11.3)
Add — Expenses not requiring outlay of working capital:		
Obsolescence		16.0
Working capital provided from extraordinary charges		4.7
New financing:		
9⅛% sinking fund debentures	11.4	138.6
6½%—8½% bank loan	11.1	3.0
Foreign subsidiaries	36.8	33.5
Revaluation of debt of foreign subsidiaries incurred prior to 1971	5.8	
Refinancing of 4¾% promissory notes	5.0	10.0
Property disposals, etc.	17.9	15.9
Decrease in investments and miscellaneous assets	9.4	9.1
Shares issued under option plans	3.1	.2
	381.1	463.3
Application of Working Capital:		
Plant additions and replacements	205.2	300.8
Dividends on preferred shares	6.4	6.4
Dividends on common shares	58.7	58.6
Reduction in long-term debt	101.2	49.8
Increase (decrease) in deferred charges	(.1)	12.1
Decrease in other liabilities	.8	2.1
Purchase of treasury shares	.2	5.1
	372.4	434.9
Net Increase in Working Capital	$ 8.7	$ 28.4
Changes in Elements of Working Capital:		
Increase (decrease) in current assets:		
Cash and marketable securities	$ (5.2)	$ 27.2
Net receivables	19.8	(7.2)
Inventories	3.3	18.2
	17.9	38.2
(Increase) decrease in current liabilities:		
Accounts payable and accruals	2.3	(9.2)
Income taxes	(45.1)	21.8
Current portion of long-term debt	33.6	(22.4)
	(9.2)	(9.8)
Net Increase in Working Capital	$ 8.7	$ 28.4

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The above statement should be read in conjunction with pages 17 through 20 of this report.

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STATEMENTS OF CONSOLIDATED PAID-IN SURPLUS AND RETAINED EARNINGS

(Dollars in millions, except per share)

	Year 1971	Year 1970
PAID-IN SURPLUS		
Balance at Beginning of Year	$583.5	$583.3
Addition:		
Excess of amounts received over the stated or par value of shares of capital stock issued under stock option plans:		
Preferred stock — stated value $2.24 each: 6,500 shares in 1971 and 11,100 shares in 1970	.2	.2
Common stock — par value $2 each: 67,138 shares in 1971	2.8	
	3.0	.2
Balance at End of Year	$586.5	$583.5
RETAINED EARNINGS		
Balance at Beginning of Year	$551.6	$550.0
Addition — Net Income for the Year	93.7	66.6
	645.3	616.6
Deduction:		
Dividends on capital stock of parent company:		
Preferred — at the annual rate of $2.75 a share	6.4	6.4
Common — $1.80 a share	58.7	58.6
	65.1	65.0
Balance at End of Year	$580.2	$551.6

The above statements should be read in conjunction with pages 17 through 20 of this report.

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(Dollars in millions, except per share)

Basis of Consolidation, etc.

The accompanying financial statements consolidate all domestic and foreign subsidiaries in which Monsanto Company (the "Company") directly or indirectly has more than a 50 per cent interest.

In the consolidation of foreign subsidiaries, foreign assets and liabilities have been translated to United States dollars at approximate quoted year-end rates, except that fixed assets have been translated at approximate rates prevailing on the dates they were acquired, and depreciation computed at applicable rates on the resulting dollar amounts; capital stocks have been translated at approximate quoted rates when issued. Income and expense items during the respective years, other than provision for depreciation, have been translated at approximate quoted rates in effect prior to the devaluation of the United States dollar in December 1971. A net loss of $0.2 arising from exchange differences and the translation of foreign currencies at December 31, 1971 has been charged to a reserve for foreign operations.

No provision has been made for income taxes on unremitted earnings of foreign subsidiaries since, in most instances, any U.S. income taxes payable on dividends which may be received from foreign subsidiaries would be substantially offset by foreign tax credits.

Depreciation, Obsolescence, Depletion

	1971	1970
Charges against income were:		
Depreciation, amortization of leasehold improvements and abandoned leaseholds	$167.4	$155.9
Obsolescence	14.7	10.5 (1)
Depletion	4.8	4.0
Total	$186.9	$170.4 (1)
Account charged		
Cost of goods sold	$172.8	$155.7 (1)
Other accounts	14.1	14.7
Total	$186.9	$170.4 (1)

(1) Excludes approximately $16.0 attributable to NTA facilities and discontinuance of certain product lines referred to under "Extraordinary Items — Net."

The use of the sum of the years digits method by the Company for computing depreciation on most new assets acquired since 1954 was continued in 1971. The excess of depreciation provided by this method over straight line depreciation was $18.3 in 1971 and $17.4 in 1970. For income tax purposes only, the Company adopted the guideline lives established for machinery and equipment by the United States Treasury Department in 1962, and the Asset Depreciation Range System class lives in 1971, as provided by the Revenue Act of 1971. In addition, there are other timing differences which affect taxable income and enter into the determination of pretax accounting income in different periods. Net income is not affected by such differences since an amount equivalent to their tax effect is either charged or credited, as the case may be, to income through the provision for deferred taxes.

Effective January 1, 1972, the Company changed its policy of computing depreciation on most new assets acquired after that date from the sum of the years digits method to the straight line method. Accelerated depreciation will be continued for income tax purposes. It is estimated that as a result of this change in policy, net income for the year 1972 will be increased by approximately $4.7, or 14 cents a share. It is anticipated that the change will have a greater effect upon earnings in subsequent years.

Doubtful Accounts and Allowances

The reserves for doubtful accounts and allowances were $15.6 at December 31, 1971 and $15.9 at the end of 1970.

Earnings a Common Share

The primary earnings a share of common stock are based on the weighted average number of common shares outstanding in each year plus the number of shares issuable upon the conversion of the convertible loan stock of Monsanto Textiles Limited and the exercise of outstanding stock options. Net income used in this computation is after deduction of dividends on the $2.75 Preferred Stock but before deduction of interest (less tax) on the convertible loan stock of Monsanto Textiles Limited.

The fully diluted earnings a share are based on the number of shares used in the determination of primary earnings, plus the number of common shares issuable upon conversion of the $2.75 Preferred Stock and upon conversion of the debentures of Monsanto International Finance Company. Net income used in this computation is before deduction of dividends on the $2.75 Preferred Stock and before

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deduction of interest (less tax) on the convertible loan stock of Monsanto Textiles Limited and on the debentures of Monsanto International Finance Company.

Equity in 50 Per Cent-Owned Companies

The equity in the unaudited 1971 net income of 50 per cent-owned companies was $1.6 compared with $1.3 in 1970. Dividends of $0.7 were received from these companies in 1971 and $0.5 in 1970 and included in other income credits. The equity in the unaudited net assets of such companies at December 31, 1971 was $20.4 which exceeded the carrying value of the investment therein of $16.0 by $4.4.

Equity in Foreign Subsidiaries

The Company's equity in the net income of foreign subsidiaries was $17.3 in 1971 and $20.5 in 1970. The Company's equity in the net assets of such companies at December 31, 1971 and 1970 was $274.0 and $261.8, respectively.

Extraordinary Items — Net

The extraordinary net charge of $11.3 in 1970 resulted from provisions for potential losses arising from federal government action causing the discontinuance of the use of sodium nitrilotriacetate (NTA) in detergents, and losses incurred, or anticipated to be incurred, in the discontinuance of other product lines including certain portions of the Company's agricultural chemicals and electronic test and measurements businesses. The charge is net of credits of $1.1 from income tax benefits relating to loss carry forwards of certain foreign subsidiaries, and credits from other items aggregating $0.6.

Income Taxes

The Company's federal income tax returns have been examined and closed for all years through 1966, and the returns for the years 1967 and 1968 are presently under examination by the Internal Revenue Service. It is believed that adequate provision has been made in the accounts for any additional taxes that may be assessed.

The investment tax credit, authorized under the Revenue Act of 1964 and terminated by the Tax Reform Act of 1969, was reinstated in 1971 on equipment acquired since August 15, 1971 or ordered since April 1, 1971. The current law provides for a credit against federal income taxes equal to 7 per cent of qualifying expenditures for machinery and equipment placed in service subsequent to the law's effective dates. The Company has consistently followed the practice of reducing its provision for current income taxes by the full amount of its investment tax credits, which aggregated $1.1 in 1971 and $9.8 in 1970.

Inventory Valuation

Inventories are stated at the lower of cost or market, determined generally on the first-in, first-out basis. Annual rate of turnover was 4.1 in 1971 and 4.0 in 1970.

Leases

The Company and its subsidiaries have a large number of lease agreements covering the use of transportation and other equipment, certain land and buildings, and retail outlets. The approximate average annual rentals payable for leases having a remaining life of three years or more are summarized as follows:

Leases Expiring in:	Annual Rentals Payable
1974-1978	$ 4.0
1979-1983	2.7
1984-1988	1.3
1989-1993	1.5
1994-1998	3.2
	$12.7

Legal Proceedings

The Company and its subsidiaries are defendants in a number of lawsuits. While the results of litigation cannot be predicted, management, based upon advice of Company counsel, believes that the final outcome of such litigation will not have a material adverse effect on the financial position or operations of Monsanto and its consolidated subsidiaries.

Liabilities — Contingent and Commitments

The Company and its subsidiaries were contingently liable as guarantors of bank loans and for customers' receivables discounted aggregating approximately $21.5 at December 31, 1971 and $15.5 at the end of 1970.

There were commitments in connection with uncompleted additions to property aggregating approximately $45.8 at December 31, 1971 and $64.4 at the end of 1970.

Long-Term Debt

The long-term debt of the Company and its subsidiaries at December 31, 1971 and 1970, exclusive of current maturities, was as follows:

	1971	1970
Parent Company:		
4¾% promissory notes due 1972/1975...	—	$ 65.0
3⅝% sinking fund debentures due 1972..	—	6.5
3½% promissory notes due 1972.........	—	4.1
Promissory notes due 1975-1976........	—	10.0
6½%-8½% bank loan due 1975/1985(a)..	$ 14.1	3.0
4¾%-6% bank loan due 1976...........	—	4.6
4½% notes due 1976....................	2.3	2.5
4¾% promissory notes due 1993...........	100.0	100.0
9⅛% sinking fund debentures due 2000..	150.0	138.6
3¾% income debentures due 2002......	91.0	91.0
4¼% income debentures due 2008......	50.0	50.0
Monsanto International Finance Company:		
4½% guaranteed sinking fund debentures due 1985 (b)..........................	25.0	25.0
Monsanto International N.V. (Netherlands Antilles subsidiary):		
8¾% guaranteed sinking fund debentures due 1985	20.0	20.0
Monsanto Textiles Limited (English subsidiary):		
Guaranteed bank loans (1% over bank rate) due 1972/1974..................	12.5	15.4
5% guaranteed loan stock due 1982/1986 (c).........................	28.1	25.9
5% guaranteed loan stock due 1992/1997	3.9	3.6
6¼% guaranteed loan stock due 1992/1997	3.9	3.6
Monsanto Chemicals Limited (English subsidiary):		
6% debentures due 1977/1982..........	5.6	5.4
5% debentures due 1982................	6.8	6.5
Monsanto (Suisse) S.A. (Swiss subsidiary):		
6¾% guaranteed sinking fund debentures due 1985..............................	7.8	6.9
6½% guaranteed sinking fund debentures due 1986..............................	13.0	—
Monsanto Europe S.A. (Belgian subsidiary):		
9% guaranteed bank loan due 1974/1979 (d)	22.3	—
Other foreign subsidiaries..................	1.9	1.7
Total...............................	$558.2	$589.3

Notes:

(a) Interest on the 6½% — 8½% bank loan is reduced by a West German government subsidy equal to a percentage of construction costs for which the loan is used.

(b) The 4½% sinking fund debentures due 1985 of Monsanto International Finance Company, which are fully guaranteed by Monsanto Company, are currently convertible into Monsanto common stock at $89 a share, subject to further adjustment under certain conditions.

(c) The 5% loan stock due 1982/1986 of Monsanto Textiles Limited, which is fully guaranteed by Monsanto Company, is convertible into Monsanto common stock beginning in 1972 at the initial conversion price of $60 a share, subject to adjustment under certain conditions.

(d) Interest on the 9% bank loan is reduced by a government subsidy of approximately 2.4% for a three-year period.

(e) Maturities and sinking fund requirements on long-term debt for the five years ending December 31, 1976 are as follows:

	1972	1973	1974	1975	1976
3⅝% sinking fund debentures	$ 6.5				
3½% promissory notes.......	4.1				
4¾% promissory notes (1993)		$ 4.7	$ 4.7	$4.7	$ 4.7
9⅛% sinking fund debentures					6.0
Bank loans (MTL)............	4.2	6.2	6.2		
Bank loans (Monsanto Europe)			1.7	1.7	1.7
Other........................	1.0	2.5	2.5	3.2	7.9
Total................	$15.8	$13.4	$15.1	$9.6	$20.3

Pension Plans

The Company and its subsidiaries have several pension plans covering substantially all of their employes, including certain employes in foreign countries.

The Company's Salaried and Hourly-Paid Employes' Pension Plans were amended for 1971 to provide increased benefits to employes. In addition, on recommendation of its independent actuarial consultants, the Company increased the assumed rate of future earnings of the related pension funds, adopted a formula for valuing assets of such pension funds, and reduced the period for amortization of certain unfunded past service costs. While the individual impact of the increase in benefits and the revised actuarial assumption was significant, the net effect of these changes was not material in relation to the Company's net income.

The total provision for pension costs for the years 1971 and 1970 was approximately $36.3 and $31.8, respectively. The provisions include, as to certain of the plans, amortization of unfunded actuarial liability generally over periods ranging from 15 to 30 years. It is the policy to fund pension costs accrued. The market value of assets in the related pension funds exceeded the actuarially computed value of vested benefits for plans of the Company and certain domestic subsidiaries as of December 31, 1971.

Preferred Stock

The outstanding preferred stock is stated at $2.24 a share and has a cumulative dividend of $2.75 a share. The involuntary liquidation preference is $35 a share, or an aggregate of $81.2 in 1971 and $81.0 in 1970. It is convertible at any time into Company common stock at the initial rate of 1.12 shares of common for each share of preferred, subject to adjustment in certain events under antidilution provisions. It may be redeemed at the Company's option at any time on or after August 12, 1974 at $73 a share, which amount is also the voluntary liquidation preference.

Repairs

Repairs and maintenance charges included in operating expenses were $127.8 in 1971 and $127.6 in 1970.

Revolving Bank Credit Agreement

A seven-year revolving credit agreement was executed on November 1, 1971, allowing the Company to borrow up to $125.0 from a group of 16 banks. Loans under this agreement will bear interest related to the prime commercial rate of the agent bank. Amounts outstanding on November 1, 1975 are required to be repaid through the period ending

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November 1, 1978. No borrowings were outstanding on December 31, 1971 under this agreement.

Lines of credit totaling $55.0 were also arranged with the same banking institutions.

Shares in Treasury

In addition to the 306,543 shares of common stock available for general corporate purposes at December 31, 1971, the Company held 131,655 shares of its common stock for specific purposes which were carried in Miscellaneous Investments in the accompanying statement of financial position at December 31, 1971.

Shares Reserved

At December 31, 1971, there were 10,400 shares of $2.75 Preferred Stock reserved for stock options, and 4,474,822 shares of common stock were reserved for the following purposes:

	Shares
Conversion of $2.75 Preferred Stock	2,598,859
Stock option plans	1,123,793
Conversion of convertible loan stock of Monsanto Textiles Limited	471,272
Conversion of debentures of Monsanto International Finance Company	280,898
Total	4,474,822

Stock Options

The status of the authorized common shares for the stock option plans for key employes and the changes occurring during the year were:

	1969 Plan	1964 Plan	1960 Plan
Outstanding 1/1/71	781,050	200,663	75,835
Unoptioned 1/1/71	168,950	—	—
Optioned during year	27,000	—	—
Exercised during year	4,588	28,392	34,158
Expired during year	—	9,361	31,376
Terminated during year	47,162	6,000	478
Outstanding 12/31/71	756,300	156,910	9,823
Unoptioned 12/31/71	189,112	—	—

Under the above three key plans, 808 options were outstanding at prices ranging from $31.25 to $58.56 a share, or a weighted average of $47.34 a share.

The status of the authorized shares of $2.75 Preferred Stock for the stock option plans for employes of the former Fisher Governor Company and the changes occurring during the year were:

Outstanding 1/1/71	16,900
Exercised during year	6,500
Outstanding 12/31/71	10,400

Under these plans, 36 options were outstanding, at prices of $46.00 and $46.50 a share, or a weighted average of $46.45 a share.

ACCOUNTANTS' OPINION

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

TEN BROADWAY
SAINT LOUIS 63102

Monsanto Company:

We have examined the accompanying consolidated financial statements (pages 13 through 20) of Monsanto Company and Subsidiaries for the years ended December 31, 1971 and 1970. Our examination was 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 financial statements present fairly the consolidated financial position of Monsanto Company and Subsidiaries at December 31, 1971 and 1970 and the results of their operations and changes in their financial position for the years then ended, in conformity with generally accepted accounting principles consistently applied.

February 10, 1972

Haskins & Sells

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MONSANTO COMPANY AND SUBSIDIARIES

HISTORICAL STATEMENT OF CONSOLIDATED INCOME

(Dollars in millions, except per share)

	1971	1970	1969	1968	1967	10 YEARS AGO 1961
Net Sales	$2,087.1	$1,971.6	$1,938.8	$1,865.1	$1,705.3	$932.9
Cost of Goods Sold	1,614.3	1,526.4	1,425.3	1,367.9	1,255.8	672.9
Gross Profit	472.8	445.2	513.5	497.2	449.5	260.0
Less:						
Selling and administrative expenses	208.2	218.9	221.1	197.2	179.6	84.7
Technological expenses	86.7	98.1	101.5	86.3	84.2	46.7
	294.9	317.0	322.6	283.5	263.8	131.4
Operating Profit	177.9	128.2	190.9	213.7	185.7	128.6
Income Charges — Net	18.5	15.3	8.1	10.2	8.9	1.5
Income Before Income Taxes	159.4	112.9	182.8	203.5	176.8	127.1
Provision for Income Taxes	65.7	35.0	73.4	87.9	71.5	58.4
Income Before Extraordinary Items	93.7	77.9	109.4	115.6	105.3	68.7
Extraordinary Charges (Credits)— Net	—	11.3	(6.7)	—	(6.4)	—
Net Income	$ 93.7	$ 66.6	$ 116.1	$ 115.6	$ 111.7	$ 68.7
Earnings a Common Share:						
Primary:						
Before extraordinary items	$2.65	$2.17	$3.08	$3.26	$2.96	$2.45
Including extraordinary items	2.65	1.83	3.28	3.26	3.15	2.45
Fully diluted:						
Before extraordinary items	2.63	2.17	3.03	3.20	2.92	2.45
Including extraordinary items	2.63	1.83	3.21	3.20	3.10	2.45

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HISTORICAL STATEMENT OF CONSOLIDATED FINANCIAL POSITION

(In millions)

ASSETS

	1971	1970	1969	1968	1967	10 YEARS AGO 1961
Current Assets:						
Cash and marketable securities	$ 74.6	$ 79.8	$ 52.6	$ 115.0	$ 57.0	$ 47.5
Net receivables	402.9	383.1	390.3	347.8	324.5	152.7
Inventories	395.4	392.1	373.9	336.8	313.4	154.5
	872.9	855.0	816.8	799.6	694.9	354.7
Investments, etc.	70.1	79.5	95.8	80.0	78.9	90.5
Property:						
Land	32.4	30.5	30.3	35.8	34.7	23.4
Buildings	408.4	397.2	381.6	368.9	364.0	195.0
Machinery and equipment	2,172.5	2,083.5	1,933.4	1,812.7	1,773.3	907.0
Phosphate deposits	12.1	12.1	11.8	11.6	11.4	8.5
Oil and gas properties	109.7	113.4	113.7	115.6	109.7	91.0
Accumulated depreciation, depletion, etc.	*1,564.8*	*1,466.8*	*1,399.4*	*1,298.1*	*1,195.5*	*544.1*
Net property	1,170.3	1,169.9	1,071.4	1,046.5	1,097.6	680.8
Deferred Charges	40.2	40.3	28.2	30.6	36.1	16.3
	$2,153.5	$2,144.7	$2,012.2	$1,956.7	$1,907.5	$1,142.3

LIABILITIES

	1971	1970	1969	1968	1967	10 YEARS AGO 1961
Current Liabilities:						
Accounts payable and accruals	$ 247.2	$ 249.5	$ 240.3	$ 217.7	$ 197.6	$ 109.3
Income taxes	63.3	18.2	40.0	49.3	52.2	48.8
Current portion of long-term debt	15.8	49.4	27.0	12.9	11.2	9.2
	326.3	317.1	307.3	279.9	261.0	167.3
Long-Term Debt	558.2	589.3	454.0	472.8	492.4	269.2
Other Liabilities and Deferred Credits	40.4	41.6	43.1	46.9	49.1	31.5
Minority Interests in Subsidiaries	2.9	2.5	3.1	2.7	2.0	23.1
Shareowners' Equity:						
Preferred stock	5.2	5.2	5.2	5.1	5.1	—
Common stock	66.3	66.2	66.2	66.2	65.9	56.0
Paid-in surplus	586.5	583.5	583.3	583.7	585.2	323.1
Retained earnings	580.2	551.6	550.0	499.4	446.8	272.1
Treasury stock	*12.5*	*12.3*	—	—	—	—
	1,225.7	1,194.2	1,204.7	1,154.4	1,103.0	651.2
	$2,153.5	$2,144.7	$2,012.2	$1,956.7	$1,907.5	$1,142.3

Italics indicate deduction.

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OTHER DATA

(In millions, except where italicized)

	1971	1970	1969	1968	1967	10 YEARS AGO 1961
Plant additions and replacements	$ 205.2	$ 300.8	$ 219.9	$ 135.0	$ 166.4	$153.8
Depreciation, depletion, etc.	$ 186.9	$ 170.4[1]	$ 163.7	$ 174.3	$ 165.2	$ 86.9
Dividends a common share	*$1.80*	*$1.80*	*$1.80*	*$1.65*	*$1.60*	*$1.00*
Book value a common share	*$37.16*	*$36.27*	*$36.25*	*$34.74*	*$33.31*	*$23.24*
Common shares	33.1	33.1	33.1	33.0	33.0	28.0
Preferred shares	2.3	2.3	2.3	2.3	2.3	—
Working capital	$ 546.6	$ 537.9	$ 509.5	$ 519.7	$ 433.9	$187.4
Long-term debt (less current maturities)	$ 558.2	$ 589.3	$ 454.0	$ 472.8	$ 492.4	$269.2
Shareowners' equity	$1,225.7	$1,194.2	$1,204.7	$1,154.4	$1,103.0	$651.2
Employes [2]	*59,271*	*62,940*	*64,604*	*62,815*	*62,073*	*38,621*
Shareowners:						
Common	*110,490*	*121,399*	*118,156*	*111,538*	*111,363*	*82,203*
Preferred	*3,897*	*3,941*	*3,621*	—	—	—

(1) Excludes $16.0 applicable to extraordinary charges.
(2) Includes Monsanto employes in plant operated for U. S. Government (1,775 in 1971).

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CHARLES H. SOMMER
Chairman

EDWARD J. BOCK
President and Chief Executive Officer

DILLON ANDERSON
Partner, Baker & Botts, Houston

H. HAROLD BIBLE
Vice President — Administration

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Vice President
General Manager, International Division

C. PRESTON CUNNINGHAM
Vice President
Managing Director, Monsanto Industrial Chemicals Company

DAVID R. CALHOUN
Chairman, St. Louis Union Trust Company

FREDRICK M. EATON
Partner, Shearman & Sterling, New York

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Vice President
Managing Director, Monsanto Polymers & Petrochemicals Company

LOUIS FERNANDEZ
Vice President
Managing Director, Monsanto Textiles Company

JOHN L. GILLIS
Senior Vice President

J. W. FISHER
Chairman, Fisher Controls Company, Inc., Marshalltown, Iowa

JAMES J. KERLEY
Vice President — Finance

JEAN MAYER
Professor of Nutrition, Harvard University

Edward A. O'Neal
Former Chairman, Monsanto Company

James S. Rockefeller
Former Chairman, First National City Bank, New York

Tom K. Smith Jr.
Vice President
Managing Director, Monsanto Commercial Products Company

Earle G. Wheeler
Former Chairman, U.S. Joint Chiefs of Staff

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Monte C. Throdahl
Vice President — Technology

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MONSANTO'S WORLDWIDE INTERESTS

Included among Monsanto's member companies around the world are those appearing in the following list. Per cent ownerships are noted parenthetically. In addition, there are a number of smaller member companies, many of which have been established for marketing or investment purposes.

NORTH AMERICA

UNITED STATES: Farmers Hybrid Companies, Inc. (100%) is a producer of hybrid breeding swine and seed corn. It also conducts research in animal genetics, including cattle.

Fisher Controls Company, Inc. (100%) manufactures and markets process measurement and control equipment.

Monsanto Enviro-Chem Systems, Inc. (100%) develops and markets engineered chemical and pollution-abatement systems.

Monsanto Flavor/Essence, Inc. (100%) manufactures essential oils, flavors and fragrances.

Monsanto International Finance Company (100%) was formed to obtain funds abroad to help finance overseas expansion.

Monsanto Research Corporation (100%) conducts research for government agencies and for Monsanto; produces nuclear sources; operates a government-owned laboratory for the Atomic Energy Commission.

CANADA: Monsanto Canada Ltd. (100%) manufactures chemicals and plastics.

Plax Canada Ltd. (50%) oroduces plastic blownware.

LATIN AMERICA

ARGENTINA: Monsanto Argentina S.A.I.C. (100%) manufactures plastics.

COLOMBIA: Fabrica de Hilazas Vanylon S.A. (49%) produces nylon 6 yarns.

MEXICO: Industrias Resistol S.A. (36%) produces chemicals and plastics.

Compania Industrial de Plasticos S.A. (100%) fabricates plastic consumer products.

NETHERLANDS ANTILLES: Monsanto International N.V. (100%) was formed to obtain funds abroad to assist in financing the operations of Monsanto Company and its subsidiaries.

PANAMA: Chemstrand Overseas S.A. (100%) and **Monsanto Overseas S.A.** (100%) hold certain investments outside the United States.

VENEZUELA: Monsanto Venezuela, Inc. (100%) produces petroleum.

EUROPE AND MIDDLE EAST

BELGIUM: Monsanto Europe S.A. (100%) manufactures plastics and chemicals in Belgium and conducts marketing activities throughout Europe.

FRANCE: Societe Monsanto (100%) manufactures plastics.

ISRAEL: Israel Chemical Fibres Ltd. (60%) manufactures *Acrilan* acrylic fiber.

LUXEMBOURG: Monsanto Cie S.A. (100%) manufactures nylon 6,6 yarns.

SPAIN: Aiscondel S.A. (50%) makes consumer plastic products. A subsidiary produces chemicals and plastics.

UNITED KINGDOM: Lansil Ltd. (100%) produces bleached cotton linters, acetate flake and yarn, textile fabrics and carpet underlay.

Monsanto Chemicals Ltd. (100%) manufactures chemicals and plastics. A major subsidiary produces plastic products for construction and home-decoration markets.

Monsanto Textiles Ltd. (100%) manufactures *Acrilan* acrylic fiber and nylon 6,6 yarns.

WEST GERMANY: Monsanto (Deutschland) GmbH (100%) markets Monsanto products throughout West Germany.

ASIA AND AUSTRALIA

AUSTRALIA: Australian Petrochemicals Ltd. (55%) manufactures raw material for rubber and plastics.

Monsanto Australia Ltd. (100%) makes chemicals and plastics. Associate companies produce fluorocarbons and synthetic latex products.

HONG KONG: Monsanto Far East Ltd. (100%) supervises marketing of Monsanto products in the Asia-Pacific area outside Japan and Australia.

JAPAN: Mitsubishi Monsanto Chemical Company (50%) manufactures chemicals and plastics.

Regional Vice Presidents

Western Region	Eastern Region	North Central Region	Governmental Affairs
Roy L. Brandenburger	Richard T. Clark	Daniel J. Murphy	Sam Pickard

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MONSANTO COMPANY / 800 N. LINDBERGH BLVD., ST. LOUIS, MISSOURI 63166

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DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

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H. HAROLD BIBLE	St. Louis
EDWARD J. BOCK	St. Louis
ANTHONY J. A. BRYAN	St. Louis
DAVID R. CALHOUN	St. Louis
C. PRESTON CUNNINGHAM	St. Louis
FREDRICK M. EATON	New York
JOHN R. ECK	St. Louis
LOUIS FERNANDEZ	St. Louis
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JAMES J. KERLEY	St. Louis
JEAN MAYER	Boston
EDWARD A. O'NEAL	St. Louis
JAMES S. ROCKEFELLER	New York
TOM K. SMITH JR.	St. Louis
MONTE C. THRODAHL	St. Louis
EARLE G. WHEELER	Martinsburg, W. Va.

Transfer Agents

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THE BOATMEN'S NATIONAL BANK OF ST. LOUIS

Registrars

THE CHASE MANHATTAN BANK (NATIONAL ASSOCIATION)
ST. LOUIS UNION TRUST COMPANY

Printed in U.S.A.

OFFICERS

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CHARLES H. SOMMER	*Chairman of the Board*
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H. HAROLD BIBLE	*Vice President*
ANTHONY J. A. BRYAN	*Vice President*
JAMES E. CRAWFORD JR.	*Vice President*
C. PRESTON CUNNINGHAM	*Vice President*
PATRICK J. DOWD	*Vice President*
JOHN R. ECK	*Vice President*
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JAMES J. KERLEY	*Vice President*
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FRANCIS E. REESE	*Vice President*
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MONTE C. THRODAHL	*Vice President*

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EDWIN J. PUTZELL JR.	*Secretary*
KENNETH N. KERMES	*Treasurer*

JACK W. MUELLER	*Assistant Controller*
WALTER C. THILKING	*Assistant Controller*
ROBERT P. ZIOMEK	*Assistant Controller*
WILLIAM A. BLASE	*Assistant Secretary*
RODNEY HARRIS	*Assistant Secretary*
C. BRENT HOLLERAN	*Assistant Secretary*
J. ROBERT MATLOCK	*Assistant Treasurer*
ROBERT B. PERKOVICH	*Assistant Treasurer*
THOMAS M. RASMUSSEN	*Assistant Treasurer*

Feb. 18, 1972

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