Monsanto ®

1968
ANNUAL REPORT
MONSANTO COMPANY

DSW 020696

FINANCIAL HIGHLIGHTS

(Dollars in Millions, Except Per Share Figures)

	1968	1967 (1)
Earnings a Share	$ 3.30	$ 3.19(2)
Cash Dividends a Share	1.65	1.60
Stock Dividend	—	2%
Income:		
Net sales	$1,792.9	$1,637.5
Interest, dividends, etc	17.1	25.2(2)
	1,810.0	1,662.7
Costs of Doing Business:		
Raw materials, fuel, supplies, etc	949.9	868.1
Wages and salaries to employes	433.0	398.6
Depreciation, depletion, etc	172.8	162.9
Taxes (income, property, etc.)	123.2	104.0
Interest expense	20.6	22.0
Minority interests in subsidiaries	1.7	2.0
	1,701.2	1,557.6
Net Income	108.8	105.1(2)
Cash Dividends Paid	54.0	51.4
Retained for Future Growth	$ 54.8	$ 53.7
Per Cent of Sales:		
Gross profit	26.1%	25.8%
Selling and administrative expenses	10.0	9.9
Research, development, patent, engineering	4.8	5.1
Net income	6.1	6.4
Plant Additions and Replacements	$ 132.9	$ 160.4
Long Term Debt (Exclusive of Current Maturities)	$ 432.9	$ 451.4
Shareowners' Equity	1,125.8	1,078.6
Equity to debt ratio	2.60	2.39
Common Shares (In Millions)	33.0	33.0
Book Value a Common Share	$ 34.11	$ 32.72
Working Capital	$ 495.6	$ 411.2
Current Assets to Current Liabilities Ratio	2.85	2.66
Employes	59,849	58,889
Shareowners	111,538	111,363

(1) Restated to reflect acquisitions in 1968. See note on page 17.
(2) Includes $6.4 million, or 19 cents a share, from sale of interest in Mobay Chemical Company.

DSW 020697

STLCOPCB4006006

TO THE SHAREOWNERS

Monsanto achieved a profit turnaround in 1968. Net income from operations advanced 10 per cent beyond the 1967 level after two years of declining earnings.

The gain came mainly from a 10 per cent sales increase, with man-made fibers leading the way. New production economies and lower raw material prices also helped profits.

Consolidated 1968 sales totaled $1,792,938,000. Income from operations was $108,825,000 or $3.30 a share on 33,008,920 shares outstanding. Comparable 1967 earnings were $3.00 a share on 32,962,005 shares. An extraordinary profit from the sale of Monsanto's interest in Mobay Chemical Company increased 1967's total earnings to $3.19 a share.

Factors whose combined influence brought about the year-to-year change in Monsanto's earnings are listed in the next column.

Man-made fibers spearheaded the 1968 sales advance as all but one of the company's 11 product groups gained. The single exception was in products for agriculture, revenues from which were reduced by depressed ammonia prices and by prior-year herbicide inventory buildups on the part of dealers.

Sales outside the United States rose 13 per cent to $410 million.

Price erosion, which particularly affected ammonia and many plastics, was again the major challenge to profitability. Indeed, an over-all decline in selling prices deprived the company of more than $21 million in after-tax income. Yet, there was general price firmness in man-made fibers, which account for about 29 per cent of the company's sales.

Administrative, marketing and technological expenses rose in 1968, as greater sums were invested in research, development and other activities to sustain Monsanto's strong competitive position and nurture the company's growth.

The year-to-year increase in earnings of 11 cents a share is accounted for as follows:

			Earnings a Share
Year 1967 earnings			$3.19
Deduct — Extraordinary item — Sale of investment in Mobay			.19
Earnings exclusive of extraordinary item			3.00
Additional earnings resulting from:			
Higher sales volume	$1.09		
Manufacturing cost savings	.31		
Lower raw material prices	.08	$1.48	
Reduction in earnings caused by:			
Lower selling prices	.66		
Higher selling, administrative, research and development expenses	.29	.95	
Increase in operating results		.53	
Other reductions in earnings:			
Higher income taxes	.21		
Higher income charges	.02	.23	.30
Year 1968 earnings			$3.30

Italics in the text of this Annual Report identify Monsanto's registered ® trademarks.

DSW 020698

STLCOPCB4006007

The company regards the federal surtax on income as a necessary step to curb inflation. Nonetheless, the new tax means a heavy financial burden. In 1968, its effect was to reduce net income by $7.3 million or 22 cents a share. Hopefully, economic conditions will warrant early rescinding of the surtax.

The company's 1968 capital expenditures at home and abroad totaled $132,899,000, compared to $160,389,000 in 1967. This was a 17 per cent decrease. Late in the year, an upturn in spending signaled a return to a higher rate of expansion in 1969.

Major capital additions completed in 1968 included units to produce polystyrene plastic (in Canada), phenol (in Australia), ABS plastics (in Addyston, Ohio) and nitrilotriacetate, a new detergent builder (in Alvin, Tex.). New U.S. plants, Monsanto's 45th and 46th, began operating in St. Louis County, Mo., and in Cupertino, Calif. The first makes plastic bottles; the second manufactures light-emitting diodes and lasers. A marketing and research facility to serve the rubber industry was completed late in the year in Akron, Ohio.

Major expansions begun or announced in 1968 will increase Monsanto's capacity to produce acrylonitrile (in England); high-density polyethylene plastic, methanol and acetic acid (in Texas City, Tex.); sulfuric acid (in Mexico and in Everett, Mass.); *Acrilan* acrylic fiber and polyester fiber (in Decatur, Ala.). The latter product will be made especially for reinforcing tires and will supplement the company's already strong position as a supplier of nylon yarn for that use.

Intensified efforts to improve profit levels led to decisions to shut down a number of production units yielding unsatisfactory returns on investment. Among the facilities involved were those for coloring and compounding thermoplastics (in Kenilworth, N.J.) and units making a dye intermediate (in Everett), ammonia (in El Dorado, Ark.) and vinyl chloride monomer (in Texas City). Although the obsolete ammonia unit at El Dorado is being phased out, Monsanto will continue as a major supplier of ammonia from modern units at two other locations. And although the company stopped making vinyl chloride monomer in the United States at year's end, manufacture of polyvinyl chloride plastics from purchased monomer continues.

The year's advances in promising new business areas included progress in devising ways to curb pollution of air and water. For example, the company has developed a process to remove sulfur dioxide from the stack gas of coal-fired power plants. In October, Monsanto began commercializing the process, which converts noxious gas to marketable sulfuric acid. The move followed more than a year of successful prototype operation at Metropolitan Edison Company's power-generating station in Portland, Pa.

Monsanto Biodize Systems, Inc., a subsidiary formed late in 1967, develops and markets processes to clean municipal and industrial waste waters. Prototype plants which that company set up in 1968 removed more than 90 per cent of organic pollutants from water. At year's end, two full-scale water-treating units were being readied.

Administrative and legislative actions by the U.S. government increasingly affect Monsanto's business. For example, the second of five tariff-cutting steps toward a 50 per cent reduction in all U.S. chemical and fiber tariffs has just taken effect. Thus, Monsanto's largest and best market, the United States, has become more accessible to countries having economic systems which foster low-price exports. At the same time, Monsanto's domestic products have not been given reciprocal access to foreign markets.

Fast growth of the market for man-made fibers enhanced Monsanto's 1968 profit performance. But imports of man-made fibers, both as such and in the form of apparel and textiles made by low-cost labor, continued their sharp rise. The new administration in Washington will therefore be urged by makers of textiles, apparel and fiber to seek for all fibers and fiber products the quota treatment cotton products already have.

The U.S. textiles industry has 40 per cent of its costs in labor. For U.S. petrochemical producers, on the other hand, the big cost item is raw materials. U.S. liquid feedstocks are about 50 per cent more expensive than those used by overseas competitors. This is due to the government's oil-import limitations, which are designed to maintain adequate domestic oil exploration and production. To keep Monsanto internationally competitive in petrochemical manufacture, Monsanto and other petrochemical producers seek full access to petroleum feedstocks at world prices.

The severity of the U.S. balance-of-payments position caused President Johnson to announce a far-reaching corrective program on Jan. 1, 1968. That program includes measures to control both the outflow of U.S. investment funds and the repatriation of foreign earnings to the United States. Monsanto has not had to curtail overseas expansion in order to comply with government guidelines. But future expansion abroad will require the company to raise some capital in local foreign markets.

As a responsible corporate citizen, Monsanto has become increasingly concerned with the nation's urgent social problems. At U.S. locations, the company and its employes have both initiated and cooperated in programs to ease these problems. In the years ahead, Monsanto, along with other companies, will almost certainly be called upon to accept even greater social responsibility.

In October, 1968, the Board of Directors discontinued the annual 2 per cent stock dividend. At the same time, the board boosted the quarterly cash dividend to 45 cents a share, five cents higher than the 40-cent quarterly rate established in 1965.

Monsanto was sorrowed in 1968 when death ended the distinguished career of Edgar Monsanto Queeny at the age of 70. Son of Monsanto's founder, Mr. Queeny served the company as president from 1928 to 1943 and as board chairman from 1943 to 1960. He was a director from 1919 until his death.

Mr. Queeny's contributions went far beyond Monsanto. He was known as a heroic advocate of free enterprise, an economist, an author and a great humanitarian. Mr. Queeny, who had many business innovations to his credit, had a strong personal interest in Monsanto's shareowner communications and did much to make them more meaningful.

The death of Senior Vice President John L. Christian was another great loss to Monsanto. Mr. Christian, who was 57, had been a Monsanto director since 1960. He was elected vice president in 1951 and senior vice president in 1966. Best known as a manufacturing man, Mr. Christian was dedicated to making Monsanto's operations efficient and productive. His deep imprint on the company endures.

Vice President Robert K. Mueller, a Monsanto director since 1961, chose early retirement in 1968 to pursue other business interests. He had served Monsanto well.

After more than three years of distinguished service as chairman of the Board of Directors, Edward A. O'Neal decided to step down from that position in July. At the same time, he indicated he plans early retirement in 1969, after which he has agreed to continue as a director.

Mr. O'Neal's action triggered a number of reassignments. For example, the board elected the signators of this letter to their present positions and elected Vice President John L. Gillis a senior vice president.

Other executive changes are discussed on page 11. They include the election of three group vice presidents. The men in these newly created positions add top-level managerial strength to Monsanto.

Many occurrences caused 1968 to be a year of transition. But 1968 was also a year of achievement. It was made so by the skill, hard work and dedicated loyalty of Monsanto employes everywhere. We are most grateful.

Sincerely,

Charles Sommer

Chairman of the Board

Edward J. Bock

President

St. Louis
February 24, 1969

> The next annual meeting of the shareowners of the company is to be held at 10 a.m. Thursday, March 27, 1969, 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.

DSW 020700

1968 OPERATIONAL HIGHLIGHTS

Most of Monsanto's activities relate in some way to the manufacture and sale of products. Therefore the year's more significant developments are discussed here primarily in terms of products and product uses. Information is classified according to Monsanto's 11 product groups and treated on a worldwide basis.

MAN-MADE FIBERS

Sales of man-made fibers rose 21 per cent to record high levels. All three Monsanto fibers — acrylic, nylon and polyester — shared in the year-to-year gain.

Acrylic and nylon prices were firm. But polyester prices softened late in the year as industry capacity began moving ahead of demand.

U.S. sales of *Acrilan* acrylic fiber benefitted from sharp growth in the market for indoor-outdoor carpeting. Monsanto's acrylic entered another big market in 1968 when the U.S. government approved using this type of fiber in making sandbags. *Acrilan* is highly qualified for both applications because of its excellent resistance to sunlight and moisture.

European sales of *Acrilan*, after a slow 1968 start, gained momentum. As the year ended, sales were at capacity level, with knitwear showing particular strength among end uses. In Israel, production and sales of *Acrilan* were at record levels, and capacity was increased.

Domestic capacity to produce *Acrilan* is being boosted to 225 million pounds annually. Completion of the expansion is scheduled for late 1969 in Decatur, Ala.

There was resurgent demand for *Blue "C"* nylon in textile applications. Growth was largely in yarn for texturing. Late in the year, Monsanto introduced a nylon with improved antistatic and moisture "wicking" properties for use in such garments as cling-free intimate apparel, hosiery and uniforms.

Monsanto sold more nylon carpet fibers than in any prior year. In December, the company announced development of *Cadon* nylon for carpeting. *Cadon*, now under test in customer mills, has improved antistatic and soil-resistant properties.

Sales of nylon for tire reinforcement approximated year-earlier levels. In 1968, Monsanto introduced a nylon yarn with improved strength for use in truck and bus tires.

In Europe, rising nylon sales taxed the capacities of both Monsanto's nylon plants. With supply and demand in closer balance, prices were restored somewhat from 1967 lows. Monsanto entered the nylon carpet yarn market with production at the Luxembourg plant early in the year.

Blue "C" polyester for apparel was produced at capacity level through most of 1968. The company's plans to make and market polyester for tire cord were announced in October. A unit to produce 60 million pounds of yarn yearly for that use is being built in Decatur. Monsanto will thus complement its present sales of nylon to tire makers.

In 1968, the *Wear-Dated* guarantee program continued to gain momentum in many world areas.

CONSOLIDATED 1968 SALES BY PRODUCT GROUPS

	PER CENT OF TOTAL	PER CENT INCREASE (DECREASE) OVER 1967	PER CENT INCREASE (DECREASE) OVER 1963
Man-Made Fibers	29.2	21	68
Plastics, Resins and Coatings	23.0	8	40
Intermediates, Plasticizers and Functional Fluids	9.2	8	55
Phosphates and Detergents	9.2	6	29
Products for Agriculture	8.8	(13)	90
Rubber and Oil Chemicals	6.3	10	35
Petroleum Products	5.4	4	15
Food Ingredients and Fine Chemicals	2.8	6	32
Textile and Paper Chemicals	2.5	27	23
Heavy Chemicals	2.0	14	50
Other Products	1.6	—	—
	100.0	10	50

DSW 020701

Since the program began, 125 million garments, representing a retail gross of $750 million, have been sold.

Also in 1968, Monsanto sold wholly owned Fabric Services, Inc., a dyeing and finishing operation in Orangeburg, S.C., to Greenwood Mills, Inc., of Greenwood, S.C. Fabric Services was no longer compatible with Monsanto's business objectives.

PLASTICS, RESINS AND COATINGS

Sales of plastics and related products advanced 8 per cent in returning to traditional growth rates.

There was strengthening in the plastics industry's major domestic markets. European, Canadian, Mexican and Far Eastern markets also expanded. In a number of areas, but principally in thermoplastic polymers, prices appeared to be stabilizing at year's end.

In 1968, the quantity of plastics used in producing the average automobile rose to about 82 pounds. Sales of an improved form of *Lustran* ABS plastic to auto and appliance makers rose sharply. Added capacity to support the increased demand for *Lustran* was installed in Addyston, Ohio.

A unit to produce *Lustrex* polystyrene came on stream in Montreal, Canada. Capacity for the same product was expanded in Long Beach, Calif. *Lustrex* is being used increasingly for molding wood-grained furniture components, a potentially large end use. Traditional, large end uses include packaging, toys, housewares and appliances.

In 1968, capacity to produce styrene monomer for the manufacture of *Lustran* and *Lustrex* was expanded in Australia and in Texas City, Tex.

Sales of polyvinyl chloride (PVC) were especially strong in developing overseas nations. Expansions of PVC capacity were begun by member companies in Japan and Mexico. New Monsanto formulations of PVC include one for the production of clear bottles. After the resin was approved by the U.S. Food and Drug Administration for packaging foods and pharmaceuticals, Monsanto incorporated the product in a number of new containers.

An obsolete Texas City unit producing vinyl chloride monomer was shut down at year's end. Production of PVC, from purchased monomer, continues.

In Texas City, Monsanto began adding 100 million pounds to annual capacity for high-density polyethylene. The addition will lift capacity to 180 million pounds a year. Blow-molded bottles are a major outlet for the plastic.

Also in Texas City, the company is building units for producing methanol and acetic acid, the latter by a new, low-cost process that resulted from Monsanto's research in catalytic systems. These units, which are to be operating in 1970, will have annual capacities of 100 million gallons and 300 million pounds, respectively. Acetic acid goes into polyvinyl acetate and other products. Methanol is a raw material for formaldehyde and, ultimately, phenolic resins for adhesives, coatings and other uses.

In 1968, *Saflex* polyvinyl butyral sold in record volume. The plastic is used primarily as interlayer in laminated safety glass. Big 1968 demand for the Monsanto product resulted from the high production level of the world automotive industry, easily the major customer for safety glass. Expansions in Springfield, Mass., and Trenton, Mich., added capacity to make resin for producing *Saflex*.

Monsanto's 1968 headway in the construction market was partly attributable to pickup in housing starts and home renovation. Company products used in building include paint intermediates, resins for drywall construction and thermal insulation, plastic siding, polyethylene film, and pipe.

Sales of products made from plastics by member companies in Canada, Mexico, Spain and the United Kingdom were greater than in 1967. The Canadian company introduced high-style, plastic-coated fabrics for upholstery and footwear.

Monsanto's position as a supplier of plastic packages continued to improve in 1968. In August, a new plant began producing plastic bottles in St. Louis.

Additional supermarket chains adopted the company's clear meat tray as a standard package. Expansion of meat-tray production was scheduled for 1969.

In 1968, two new models joined Monsanto's line of plastic vending cups.

Prices of plastic packages, particularly blownware, strengthened somewhat during the year.

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

	1968	1967(1)	Per Cent Increase *Decrease*
	(In Thousands)		
SALES:			
First quarter...	$ 433,922	$ 423,329	2.5
Second quarter	466,224	423,372	10.1
Third quarter..	437,015	384,667	13.6
Fourth quarter.	455,777	406,114	12.2
	$1,792,938	$1,637,482	9.5
INCOME:			
First quarter...	$ 27,692	$ 38,218(2)	*27.5*
Second quarter	31,667	27,622	14.6
Third quarter..	24,100	16,507	46.0
Fourth quarter.	25,366	22,744	11.5
	$ 108,825	$ 105,091	3.6

	1968	1967(1)
EARNINGS A SHARE:		
First quarter	$ .84	$1.16(2)
Second quarter	.96	.83
Third quarter	.73	.51
Fourth quarter	.77	.69
	$3.30	$3.19

SHARES OUTSTANDING DECEMBER 31:

1968....................................33,008,920

1967....................................32,962,005

(1) Restated to reflect acquisitions in 1968. See note on page 17.
(2) Includes profit on sale of investment, net of applicable income tax, of $6,394,000, equivalent to 19 cents a share.

INTERMEDIATES, PLASTICIZERS AND FUNCTIONAL FLUIDS

The group bettered its 1967 sales performance by 8 per cent.

Monsanto is a major supplier of intermediates used in making paints, polyester resins, and dyestuffs. In 1968, rising worldwide demand for these intermediates allowed some prices to increase to more reasonable levels.

At the same time, more efficient processes and new production economies were instituted or planned to improve the profit performances of such intermediates as phenol, adipic acid, maleic anhydride, fumaric acid and nitroanilines.

A similar program was undertaken to help buoy plasticizer profits. Monsanto's position in plasticizers, which impart flexibility and other desirable properties to plastics, is a strong one. In 1968, the company laid plans to exploit that position through a new and more efficient network of production units.

Fire-retardant plasticizers for the construction, automotive and textiles industries were singled out for special emphasis. Construction was begun on units to make phosphate esters for such plasticizers in Sauget, Ill., and in Bridgeport, N.J.

Sales of fire-resistant hydraulic fluids rose sharply in 1968. Overseas markets were especially strong. In many countries, the coal-mining industry has adopted safety measures which include use of *Pydraul* fire-resistant hydraulic fluid in mining equipment.

Skydrol fire-resistant hydraulic fluid for aircraft held its strong position in the worldwide airline industry despite intensified competition. *Therminol* heat-transfer fluid found new uses in ocean-going freighters, institutional buildings, food preparation and chemical processing in 1968.

Capacity to produce askarel dielectric fluids for transformers and capacitors was increased at two U.S. plants and one in the United Kingdom. Construction of another unit to produce askarel got under way in Japan.

PHOSPHATES AND DETERGENTS

There was a 6 per cent increase in sales of phosphates, detergent actives and related products.

Said to be the most significant detergent news in 20 years was the 1968 introduction and enthusiastic acceptance of detergent enzymes in the United States. Monsanto offered the first such enzyme produced domestically and is now a leading enzyme supplier. The company is readying new enzymes for 1969 introduction.

Sodium tripolyphosphate, the principal detergent builder, and other detergent phosphates moved in record volume in 1968. Sales of dentifrice phosphates rose, with exports showing special strength. At times, there was difficulty in producing enough phosphorus to meet demands for the element's derivatives.

To satisfy increasing demand for biodegradable alkylbenzene, Monsanto expanded the unit producing that vital detergent active near Alvin, Tex. At the same location, the company completed a production unit for nitrilotriacetate (NTA), a new chemical used in combination with sodium phosphate to improve detergent performance. Commercial shipments of NTA had begun by year's end.

After two years of unsatisfactory operation, the world's largest furnace for phosphorus production ran well throughout 1968. The big furnace is at Monsanto's plant in Soda Springs, Idaho.

A number of specialty products turned in strong sales gains. Among such products were *Phos-Chek* fire retardants, used in formulating paints and quenching forest fires. Also among them were *Dequest* organophosphorus sequestering agents, which found a range of new applications that included washing bottles and descaling industrial boilers.

PRODUCTS FOR AGRICULTURE

After many years of uninterrupted growth, the group's sales decreased 13 per cent.

There were two principal causes. One was price weakness in fertilizers. The other was cutbacks in purchases of *Ramrod* weed killer by dealers who had overstocked in 1967.

Industry overcapacity in plant foods brought about severe price declines that held sales well below 1967 levels. Monsanto decided to shut down obsolete units producing ammonia, urea, and nitrogen solutions in El Dorado, Ark.

Ramrod received new clearances from the U.S. Department of Agriculture qualifying the herbicide for all corn and sorghum crops. After dealer inventories were worked off, sales of the product returned to normal levels.

World demand for other Monsanto crop-protection chemicals rose. *Avadex* wild-oat killer for use with small-grain crops moved ahead strongly, and capacity to make the product was increased in Nitro, W.Va. There was a pickup in demand for *Rogue* herbicide, which controls grassy weeds in rice. But dollar sales were held back by lower prices.

In 1968, Monsanto received a U.S. patent on propanil, the chemical which is the active herbicidal component of *Rogue*. One of six suits the company filed to enforce that patent has been settled out of court; the others are unresolved. Meanwhile, the 1967 priority-of-invention award Monsanto received in connection with its application for a herbicide use patent for *Rogue* is being contested in the courts by one competitor.

Overseas in 1968, Monsanto introduced *Lazo* weed killer to protect corn and cotton. One of the product's several advantages is that it does not have to be worked into the soil. Furthermore, there is no chemical buildup to interfere with crop rotation. Domestic marketing of the product to growers of corn and soybeans began early in 1969. U.S. sales are under Monsanto's *Lasso* trademark.

Being readied for 1969 marketing was a weed killer that combines *Ramrod* selective herbicide with atrazine for use on corn and sorghum crops. The combination provides the broadest spectrum of weed control of any corn herbicide available. This product at year's end was awaiting label clearances for U.S. marketing.

Niran insect killer sold well as growers of cotton and other crops increased their demand for the Monsanto product.

MONSANTO'S DIVISIONS

In 1968, the company had these nine divisions: Agricultural Division, Hydrocarbons & Polymers Division, Inorganic Chemicals Division, International Division, New Enterprise Division, Organic Chemicals Division, Packaging Division, Plastic Products & Resins Division and Textiles Division.

RUBBER AND OIL CHEMICALS

Total sales of the group were up 10 per cent.

Sales of chemicals to improve rubber products were well ahead of year-earlier levels as the predicted 1968 slowdown because of 1967 tire-inventory buildup did not materialize. Some key products were in short supply even though many Monsanto production units ran at rates exceeding design capacities.

In response to continuing strong demand for Monsanto's products by the rubber and tire industries, the company planned production increases in several countries. At year's end, Monsanto's new international research and marketing center in Akron, Ohio, was being readied for occupancy. Marketing, research and technical-service resources in rubber chemicals are being concentrated there.

In 1968, plans were completed for a substantial increase in worldwide sales of the company's rubber-testing instruments.

Sales of petroleum additives were above year-earlier levels. Gains were due largely to an increase in domestic volume, particularly in the area of new products to satisfy the rigorous lubricating requirements of diesel engines. Sales are expected to increase in Europe when additives are available from Monsanto's new units in Newport, England, which began production late in 1968. The additives plant built by Monsanto's associate company in Japan operated successfully during the year.

PETROLEUM PRODUCTS

Sales of natural gas, crude oil and refinery products exceeded their 1967 total by 4 per cent.

Markets for gasolines, diesel fuels and asphalts remained strong. Price declines were minimal. The refinery in El Dorado, Ark., operated at capacity.

Sales of crude oil and natural gas increased. Participation in 66 new wells gave Monsanto a net gain of 38 wells.

Near the end of the year, an initial well was drilled in the Dutch North Sea by an exploration group in which Monsanto has a one-third interest. Results were unfavorable. The group scheduled additional North Sea drillings for 1969.

FOOD INGREDIENTS AND FINE CHEMICALS

Sales of this group advanced 6 per cent.

Although sales of bulk aspirin rose, world aspirin consumption fell short of 1966's peak level. At the same time, rising exports to world markets helped produce an outstanding sales gain for TCC bacteriostat, used in deodorant bar soaps and other products.

Lactic acid, a food-grade intermediate and acidulant, achieved its greatest sales to date. Construction begun at year's end will add 50 per cent to the capacity of Monsanto's lactic acid unit in Texas City.

Sales of vanillin products recovered somewhat from 1967 levels despite lower prices caused by import competition.

George Lueders & Company, acquired early in 1968 as a nucleus for Monsanto's growth in the flavor and fragrance business, formulated plans to expand its role as a supplier of ingredients for cosmetics and for premixed and precooked foods.

TEXTILE AND PAPER CHEMICALS

Sales of chemicals for the manufacture of textiles and paper shot ahead 27 per cent. Most of the thrust came from acrylonitrile, a raw material which was in heavy demand by makers of nylon and acrylic fibers.

In 1968, construction of a major acrylonitrile production unit got under way in the United Kingdom. Due for completion early in 1970, the unit will add 200 million pounds to the company's yearly capacity. At its plant in Alvin, Tex., Monsanto increased domestic acrylonitrile capacity in 1968.

Also in 1968, manufacture of tall oil was increased in Nitro, W.Va. Tall oil rosin is basic to production of Monsanto's *Mersize* sizing agents to make paper stronger and more water-resistant.

Scripset surface additives, used in a Monsanto-developed alkaline paper-sizing system, were introduced and well received in Japan and the United Kingdom.

Pentachlorophenol, an important wood preservative in this group, made a sharp sales increase.

HEAVY CHEMICALS

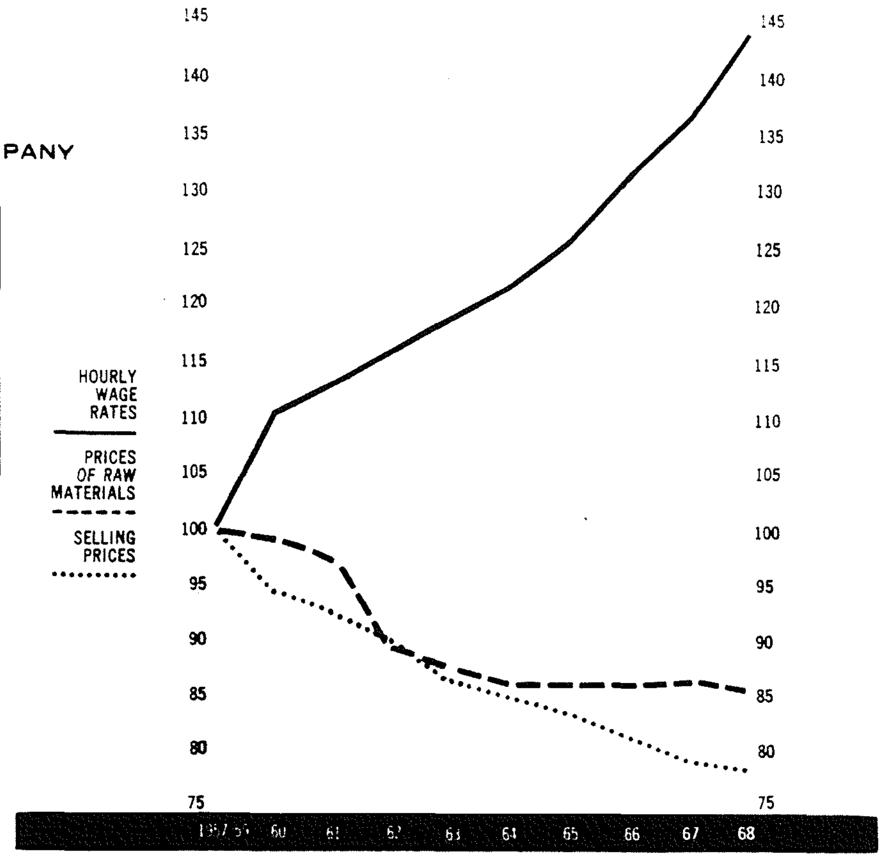
Sales of heavy chemicals topped year-earlier records by 14 per cent. The gain was spearheaded by two basic chemicals, salt and sulfuric acid, both of which showed unusual sales strength.

Production of salt on Cote Blanche Island, La., increased substantially. Sales of sulfuric acid from three U.S. plants and the plant in Lecheria, Mexico, were sharply higher.

PARENT COMPANY

INDEX OF HOURLY WAGE RATES, PRICES OF RAW MATERIALS AND SELLING PRICES

1957 – 1959 = 100



A major expansion of the Lecheria acid unit was scheduled for 1969 completion. Meanwhile, the acid unit in Everett, Mass., was being replaced by a more modern one.

OTHER PRODUCTS

The diversified products discussed in this section represent developmental businesses of the New Enterprise Division.

In 1968, Monsanto continued as a major independent supplier of semiconductor materials, including silicon, to makers of transistors, rectifiers and solid-state microcircuits. Growing demand and product excellence helped expand the company's sales in this area.

Twenty new electronic instruments for testing and measuring were added to the company's product line as sales to industry and to government agencies rose. Monsanto's pioneering solid-state materials, which emit light when supplied with electric energy, were introduced commercially from a new plant in Cupertino, Calif.

The company's unique technology for casting polymer-based composites was developed further during the year. Prime effort went into demonstrating to key customers the performance of components made by Monsanto. As a result of this program, the company commercialized a new wear-resistant, easy-to-maintain flooring system; flexible ceramic floor and wall panels; and custom-made parts.

Five additional stadium installations of *AstroTurf* recreational surface were completed in 1968. These were at the University of Alabama, Boston University, Hofstra University, the University of Washington, and Atwood Stadium in Flint, Mich. By year's end, a large number of orders had been received for 1969 installations. Meanwhile, golf surfaces also continued to gain in popularity.

In 1968, Monsanto announced that *Puma* protein beverage was ready for market. The first franchised bottling operation was scheduled for 1969 startup in Latin America. Additional bottling operations were planned there and in the Far East.

Late in the year, Monsanto introduced a series of new enzymes to speed chemical reactions. The products have processing applications in the textiles, paper, baking and leather industries.

GROSS ADDITIONS TO PROPERTY AND DEPRECIATION

	Property Additions	Depreciation, Obsolescence, Amortization and Depletion
	(Millions of Dollars)	
1959	76.9	76.4
1960	121.3	79.1
1961	153.8	86.9
1962	168.9	97.7
1963	114.7	114.7
1964	218.1	120.3
1965	295.3	133.5
1966	211.0	152.4
1967	160.4	162.9
1968	132.9	172.8

BUSINESS ABROAD

Outside the United States, record sales produced record earnings. The year was marked by major improvement in the European fiber market, strong performances by member companies overseas and rising export sales.

Monsanto's worldwide marketing program is directed by area groups for Africa-India, Asia-Pacific, Australia, Canada, Europe, Japan and Latin America. The 1968 openings of sales offices in Bangkok, Johannesburg, Manila, Santo Domingo and Stockholm brought the overseas total to 41.

To assist the world need for greater food production, Monsanto is devoting increasing emphasis to the spread of its products and technology in the agricultural field. Other major growth areas abroad will be in man-made fibers and in specialty products and systems.

RESEARCH AND DEVELOPMENT

In 1968, as in previous years, many new products and processes originated in Monsanto research and development laboratories. The company succeeded in commercializing 68 basic new products and upgrading many other existing products. Also in 1968, Monsanto received 454 U.S. patents and 1,364 patents in other countries.

Expenditures for research, development, patent work and basic engineering totaled $86.3 million, compared to $84.2 million in 1967.

The Central Research Department seeks better ways to make existing products and investigates areas of basic science which are pertinent to the company's operations. The department's present work includes investigations of new catalysts, electrochemistry, organic and organophosphorus chemistry. As an example, work in the department's catalyst section led to the process that will be used to make acetic acid in Texas City, Tex. The new process, carried out at very low pressures and mild temperatures, leads to high yields of easily purified product.

Monsanto continued its research program with Washington University (in St. Louis) for the U.S. Department of Defense. Out of the program have come significant findings in the field of reinforced composite materials. Some of this basic work may be commercialized through Monsanto's New Enterprise Division.

In October, wholly owned Monsanto Research S.A. moved into new laboratories in Zurich. That company, a part of the Central Research Department network, serves as a valuable interface with European science. Reports on research programs and other activities constantly feed back to Monsanto's U.S. research centers and help keep company scientists current with progress being made in Europe.

Monsanto Research Corporation, also wholly owned, continued developing technology of prime concern to health and national defense and of potential interest to Monsanto's commercial efforts.

Particularly noteworthy at the laboratory in Dayton, Ohio, was the development of a process for bonding graphite reinforcements to resinous materials for possible use in aerospace and commercial aviation.

Major research effort went into the area of environmental control as part of Monsanto's over-all work on pollution abatement. Projects included additional research on removing sulfur dioxide from stack gases and development of instruments to detect and measure noxious oxides in the atmosphere.

Monsanto Research Corporation continues to operate the U.S. Atomic Energy Commission's Mound Laboratory in Miamisburg, Ohio. In addition to key assignments in the AEC weapons program, the laboratory does extensive research and production on radioactive heat sources to produce electricity for applications as varied as navigational satellites and cardiac pacemakers. The laboratory also separates carbon-13 and stable isotopes of noble gases, for use in biological, cryogenic, physical and nuclear research. It is the nation's sole supplier of these isotopes.

PERSONNEL

A number of management changes occurred in 1968. Most of them came at the same time as the top-level changes described on page 3.

These vice presidents were elected to the newly created group vice presidencies: John R. Eck, James D. Mahoney and Tom K. Smith Jr. Mr. Mahoney also continues as general manager of the Textiles Division.

Vice President H. Harold Bible was given responsibility for corporate administration. At the same time, Mr. Bible and Vice President Edwin J. Putzell Jr., general counsel and corporate secretary, were made members of the Corporate Development Committee.

Vice President Francis E. Reese succeeded Mr. Bible as general manager of the Hydrocarbons & Polymers Division. Anthony J. A. Bryan succeeded Mr. Reese as general manager of the International Division. Dr. Louis Fernandez succeeded Mr. Eck as general manager of the Inorganic Chemicals Division. Howard L. Minckler succeeded Mr. Smith as general manager of the Organic Chemicals Division. Lewis F. Steinbach was elected controller.

In 1968, programs to speed the development of employes with outstanding ability were again emphasized. More than 1,200 key managerial and professional employes were involved.

Monsanto employes achieved the best safety record in the company's history. At the same time, property loss was at the lowest level in recent years.

Labor relations were favorable in 1968. Nine labor contracts were negotiated. Five are three-year contracts; four will run two years. A strike at Trenton, Mich., which occurred during contract negotiations there, lasted 13 days.

In cooperation with the National Alliance of Businessmen, Monsanto more than met its commitment to hire disadvantaged youth for the summer. Meanwhile, the company continued its program for hiring and upgrading the unemployed and underemployed. Employment of so-called minority groups rose more than 10 per cent in the year.

SHAREOWNERS OF RECORD

	1968		1967		1966		1965		1964	
	Number of Share-owners	Number of Shares	Number of Share-owners	Number of Shares	Number of Share-owners	Number of Shares	Number of Share-owners	Number of Shares	Number of Share-owners	Number of Shares
Men	36,605	4,834,777	37,094	5,004,713	32,301	4,583,590	32,084	4,610,890	30,446	4,691,800
Women	32,963	3,897,063	32,811	3,961,870	29,983	3,837,791	29,211	3,872,397	28,328	3,850,905
Joint Accounts	24,929	1,326,692	24,541	1,282,708	19,030	952,801	18,431	897,004	17,770	909,442
Charitable Institutions	451	181,040	511	200,787	508	206,202	488	204,768	480	204,432
Educational Institutions	125	139,198	147	202,529	143	208,153	128	197,391	136	190,164
Estates and Trusts	12,644	1,726,361	12,363	1,771,876	10,429	1,795,397	9,770	1,723,319	9,384	1,669,731
Insurance Companies	184	1,207,856	228	1,317,139	267	1,279,902	270	1,322,827	236	1,196,581
Brokers and Nominees	2,041	18,649,909	1,999	18,186,175	1,900	18,429,055	1,800	17,853,952	1,685	16,629,555
All Others	1,596	1,046,024	1,669	1,034,208	1,377	1,015,932	1,356	951,809	1,368	1,517,317
Total	111,538	33,008,920	111,363	32,962,005	95,938	32,308,823	93,538	31,634,357	89,833	30,859,927

1968, 68 per cent of Monsanto shareowners held fewer than 100 shares.

DSW 020708

MONSANTO COMPANY

STATEMENT OF CONSOLIDATED FINANCIAL

ASSETS

	1968	1967
Current Assets:	*(In Thousands)*	
Cash	$ 24,806	$ 23,317
Marketable securities, at cost which approximates market	88,850	31,272
Net receivables	335,925	313,901
Inventories	313,062	290,522
	762,643	659,012
Investments and Miscellaneous Assets, at Cost or Less:		
Investment in and advances to associates	12,190	11,859
Miscellaneous investments and receivables	67,729	66,853
	79,919	78,712
Property, Plant and Equipment, at Cost	2,306,874	2,259,596
Less accumulated depreciation and depletion, etc.	1,282,680	1,182,390
Net property	1,024,194	1,077,206
Deferred Charges	28,498	33,788
	$1,895,254	$1,848,718

The above statement should be read in conjunction with pages 17, 18 and 19 of this report.

DSW 020709

AND SUBSIDIARIES

POSITION AT DECEMBER 31, 1968 AND 1967

LIABILITIES

	1968	1967
	(In Thousands)	
Current Liabilities:		
Accounts payable and accruals	$ 207,663	$ 187,173
Income taxes	47,651	50,585
Current portion of long term debt (less $1,000,000 debentures in treasury in 1968)	11,834	10,063
	267,148	247,821
Notes, Debentures, etc.—Less Current Portion Above	432,880	451,377
Other Liabilities and Deferred Credits:		
Deferred income taxes	36,593	38,394
Miscellaneous	8,759	9,437
	45,352	47,831
Minority Interests in Subsidiary Companies	24,070	23,013
Shareowners' Equity:		
Common shares—authorized, 50,000,000 shares, par value $2 each; outstanding, 33,008,920 shares in 1968 and 32,962,005 shares in 1967	66,018	65,924
Paid-in surplus	579,304	581,134
Retained earnings	480,482	431,618
	1,125,804	1,078,676
	$1,895,254	$1,848,718

DSW 020710

MONSANTO COMPANY

STATEMENT OF CONSOLIDATED INCOME

	1968	1967	Increase Decrease
	(In Thousands)		
Net Sales	$1,792,938	$1,637,482	$155,456
Cost of Goods Sold	1,324,595	1,214,561	110,034
Gross Profit	468,343	422,921	45,422
Less:			
Selling and administrative expenses	179,611	162,779	16,832
Research, development, patent and engineering expenses	86,281	84,224	2,057
	265,892	247,003	18,889
Operating Profit	202,451	175,918	26,533
Income Charges—Net	11,519	10,445	1,074
Income Before Income Taxes	190,932	165,473	25,459
Provision for Income Taxes:			
Current	83,908	70,238	13,670
Deferred (credit)	(1,801)	(3,462)	1,661
	82,107	66,776	15,331
Income Before Extraordinary Item	108,825	98,697	10,128
Extraordinary Gain on Sale of Investment, Less Applicable Income Tax of $2,131,000		6,394	*6,394*
Net Income	$ 108,825	$ 105,091	$ 3,734
Earnings a Common Share (1):			
Before extraordinary item	$3.30	$3.00	$.30
Including extraordinary item	3.30	3.19	.11

(1) Based on shares outstanding at end of year — 33,008,920 in 1968 and 32,962,005 in 1967.
The above statement should be read in conjunction with pages 17, 18 and 19 of this report.

DSW 020711

STLCOPCB4006020

AND SUBSIDIARIES

STATEMENTS OF CONSOLIDATED PAID-IN SURPLUS AND RETAINED EARNINGS

	1968	1967
	(In Thousands)	
PAID-IN SURPLUS		
Balance at Beginning of Year:		
As previously reported	$580,533	$550,842
Adjustment—see note on page 17	601	601
As restated	581,134	551,443
Additions:		
Excess of approximate market value of common capital stock distributed as a stock dividend over the par value thereof		29,440
Excess of amounts received over the par value of common capital stock issued under stock option plans	1,636	251
	582,770	581,134
Deduction:		
Pro-rata portion of excess of cost over par value of 199,412 shares of common capital stock in treasury, issued to effect the acquisition, in pooling of interests transactions, of equities in two subsidiary companies (see Retained Earnings below)	3,466	
Balance at End of Year	$579,304	$581,134
RETAINED EARNINGS		
Balance at Beginning of Year:		
As previously reported	$428,408	$406,134
Adjustment—See note on page 17	3,210	2,477
As restated	431,618	408,611
Addition—Net Income for the Year	108,825	105,091
	540,443	513,702
Deductions:		
Dividends on capital stock of parent company:		
Cash—$1.65 a share in 1968 and $1.60 a share in 1967	54,032	51,347
Stock—2%		30,732
	54,032	82,079
Dividend of subsidiary prior to acquisition		5
Pro-rata portion of excess of cost over par value of 199,412 shares of common capital stock in treasury, issued to effect the acquisition, in pooling of interests transactions, of equities in two subsidiary companies (see Paid-in Surplus above)	5,929	
	59,961	82,084
Balance at End of Year	$480,482	$431,618

The above statements should be read in conjunction with pages 17, 18 and 19 of this report.

DSW 020712

MONSANTO COMPANY AND SUBSIDIARIES

CONSOLIDATED SOURCE AND APPLICATION OF FUNDS

(In Thousands)

	TOTAL	1968	1967	1966	1965	1964
Source of Funds:						
From operations:						
Net income	$ 565,635	$108,825	$105,091	$113,058	$123,404	$115,257
Non-cash charges to income:						
Depreciation, depletion, etc.	741,967	172,818	162,909	152,399	133,530	120,311
Deferred income taxes	12,072	*1,801*	*3,462*	*1,247*	6,534	12,048
Goodwill write-off	6,075			6,075		
	1,325,749	279,842	264,538	270,285	263,468	247,616
Outside financing:						
4½%-4¾% promissory notes	100,000			25,000	75,000	
4½% sinking fund debentures	25,000				25,000	
Foreign subsidiaries	42,858	1,600		5,206	32,776	3,276
Common shares issued under options	24,507	1,730	265	2,305	8,099	12,108
Other — net	21,777	9,091	3,823	3,905	3,723	1,235
	1,539,891	292,263	268,626	306,701	408,066	264,235
Application of Funds:						
Dividends on common shares	238,301	54,032	51,347	50,507	44,809	37,606
Dividends of subsidiary prior to acquisition	68		5	29	17	17
Plant additions and replacements	1,017,706	132,899	160,389	210,998	295,288	218,132
Investment in affiliated companies	15,397	931			1,126	13,340
Retirement of debt	81,795	18,326	31,692	9,963	11,396	10,418
Increase in working capital (1)	198,799	27,008	44,245	52,913	44,735	29,898
Increase—*decrease* in cash and securities	*12,175*	59,067	*19,052*	*17,709*	10,695	*45,176*
	$1,539,891	$292,263	$268,626	$306,701	$408,066	$264,235

(1) Exclusive of cash and securities and current portion of long term debt.
The years 1964 through 1967 have been restated as described on pages 17 and 18 of the Financial Review.
Italics indicate deduction.

DSW 020713

FINANCIAL REVIEW

Basis of Consolidation, etc.

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

During 1968, the company acquired equities in two subsidiary companies in exchange for 199,412 shares of Monsanto treasury stock. These transactions were accounted for as pooling of interests and, accordingly, the consolidated financial statements for 1968 include the operations of the acquired companies for the entire year. The financial statements for the preceding year have been restated on a comparable basis.

Depreciation, Obsolescence, Depletion

Charges against income for depreciation, obsolescence and depletion amounted to $172,818,000, of which $169,217,000 was depreciation and obsolescence, and $3,601,000 depletion. In 1967, such charges were $158,888,000 and $4,021,000.

The use of the sum of the years digits method for computing depreciation on most of new assets acquired since 1954 was continued in 1968. The excess of depreciation provided by this method over straight line depreciation was $22,925,000 in 1968 and $23,545,000 in 1967. For income tax purposes only, the company in 1962 adopted the guideline lives established for machinery and equipment by the United States Treasury Department. 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.

Doubtful Accounts and Allowances

The reserves for doubtful accounts and allowances were $14,348,000 at December 31, 1968 and $14,017,000 at the end of 1967.

Employes' Bonus

The provision for employes' bonus in 1968 was $3,134,000, compared with $1,200,000 in 1967. On February 4, 1969, bonus awards aggregating $3,985,200 were made to 893 officers and employes. No bonus awards were granted for 1967.

Equity in Associates

The equity in the unaudited 1968 net income of 50 per cent-owned companies was $1,371,000 compared with $1,517,000 in 1967. Dividends of $501,000 were received from these companies in 1968 and $553,000 in 1967. The equity in the unaudited net assets of such companies at December 31, 1968 was $12,464,000, which exceeded the carrying value of the investment therein of $12,190,000 by $274,000.

Income Taxes

The company's Federal income tax returns have been examined and closed for all years through 1959. Examinations by the Internal Revenue Service of returns for the years 1960 through 1963 have been largely completed, and returns for the years 1964 and 1965 are presently under examination. It is believed that adequate provision has been made in the accounts for any additional taxes that may be assessed.

The Revenue Act of 1964 provides for a credit against Federal income taxes equal to approximately 7 per cent of expenditures for machinery and equipment purchased and placed in service during the year. The reduction in income tax provision for 1968 resulting from this credit was $4,816,000 which compares with a credit of $6,969,000 in 1967.

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 4.4 in 1968 and 4.3 in 1967.

Leases

The company has a number of lease agreements covering the use of transportation and other equipment, certain buildings, and retail outlets, which are generally cancellable without penalty. For the most part, the agreements are short term, with a few extending up to 20 years. The annual rental for all leases amounts to approximately $29,428,000.

Legal Proceedings

The company and its subsidiaries are defendants in a number of lawsuits and patent infringement actions. 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 materially adversely affect the financial position or operations of Monsanto and its consolidated subsidiaries.

Liabilities — Contingent

The company and its subsidiaries were contingently liable as guarantors of bank loans and for customers' receivables discounted aggregating approximately $13,000,000 at December 31, 1968 and $10,200,000 at the end of 1967.

Long Term Debt

The long term debt of the company and its subsidiaries at December 31, 1968 and 1967, exclusive of current maturities, was as follows:

	1968	1967
	(In Thousands)	
Parent company:		
4½% - 4¾% promissory notes, due 1970/1975	$100,000	$100,000
2.65% debentures, due 1971	17,000	18,000
3⅝% sinking fund debentures, due 1972	7,500	8,000
3½% promissory notes, due 1972	15,712	21,512
4½% notes, due 1976	2,920	3,120
4¾% promissory notes, due 1993	100,000	100,000
3¾% income debentures, due 2002	91,000	91,000
4¼% income debentures, due 2008	50,000	50,000
Monsanto International Finance Company:		
4½% guaranteed sinking fund debentures, due 1985	25,000	25,000
Monsanto Chemicals Limited (English subsidiary):		
6% debentures, due 1977/1982	5,867	6,071
5% debentures, due 1982	6,922	7,132
Monsanto Textiles Limited (English subsidiary):		
Bank loans (½% over bank rate) due 1969 (see note below)	4,174	10,805
Monsanto Cie S.A. (A Luxembourg subsidiary):		
4¾% bank loans due 1969/1971	4,008	6,012
4¼% bank loan due 1969	—	3,000
Monsanto Mexicana S.A.:		
10.5% bank loan due 1969/1973	1,280	—
Other subsidiaries	1,497	1,725
Total	$432,880	$451,377

Note: New bank loans were negotiated in August 1968 by Monsanto Textiles Limited for £10,000,000 ($24,000,000 at the current exchange rate), bearing interest at 1% over the United Kingdom bank rate. The loans are repayable during the years 1970 through 1974.

Monsanto International Finance Company Debentures

The $25 million of 4½ per cent 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.

Pension Plans

The company and its subsidiaries have several pension plans covering substantially all of their employes, including certain employes in foreign countries. The total pension expense for the years 1968 and 1967 was approximately $27,277,000 and $26,324,000, respectively. The expense includes, as to certain of the plans, amortization of prior service cost generally over a period of 30 years. It is the policy to fund pension cost accrued. The actuarially computed value of vested benefits for the plans of the parent company and certain domestic subsidiaries as of December 31, 1968 was approximately equal to the related pension funds.

Pro Forma Earnings

The reduction in earnings a common share which would result from the complete conversion of debentures of Monsanto International Finance Company and the exercise of all outstanding stock options would be approximately 6 cents.

Repairs

Repairs and maintenance charges included in operating expenses were $111,715,000 in 1968 and $102,857,000 in 1967.

Restatement of 1967 Accounts

In addition to the restatement of accounts described under "Basis of Consolidation, etc.," deferred income taxes of $12,533,000 which in 1967 were included in deferred charges, have been netted against deferred income taxes shown under other liabilities, to conform with Opinion Number 11 of the Accounting Principles Board, which became effective January 1, 1968.

Sale of Investment

The gain in 1967 of $6,394,000, net of tax, from the sale of investment was realized on the disposal of a 50 per cent ownership in Mobay Chemical Company. The purchasers were Farbenfabriken Bayer A. G. interests, which owned the other half-interest in Mobay.

DSW 020715

Shares Reserved

At December 31, 1968, there were 744,352 shares of common stock reserved for stock option plans, and 280,898 shares reserved for conversion of debentures of Monsanto International Finance Company.

Stock Options

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

	1951 Plan	1960 Plan	1964 Plan
Outstanding 1/1/68	20,948	181,325	447,101
Unoptioned 1/1/68	—	—	141,903
Optioned during year	—	—	162,100
Exercised during year	20,948	25,967	—
Terminated during year	—	10	27,895
Outstanding 12/31/68	—	155,348	581,306
Unoptioned 12/31/68	—	—	7,698

Under the two remaining key plans, 517 options were outstanding, at prices, after adjustment for stock dividends, ranging from $33.57 to $97.18 a share.

ACCOUNTANTS' OPINION

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

515 OLIVE STREET
SAINT LOUIS 63101

Monsanto Company:

We have examined the accompanying consolidated financial statements (pages 12 through 19) of Monsanto Company and its subsidiary companies for the year ended December 31, 1968. 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 financial position of Monsanto Company and its subsidiaries at December 31, 1968 and the results of their operations and source and application of their funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

February 6, 1969

Haskins & Sells

DSW 020716

MONSANTO COMPANY

HISTORICAL STATEMENT OF

(In millions)

ASSETS

	1968	1967	1966	1965	1964	10 YEARS AGO 1958	25 YEARS AGO 1943
Current Assets:							
Cash	$ 24.8	$ 23.3	$ 27.8	$ 33.2	$ 27.9	$ 36.4	$13.2
Marketable securities	88.9	31.3	45.9	58.2	52.8	48.0	1.0
Net receivables	335.9	313.9	299.0	267.7	240.1	113.8	9.0
Inventories	313.1	290.5	280.1	260.4	216.3	121.5	12.9
	762.7	659.0	652.8	619.5	537.1	319.7	36.1
Investments, etc.	79.9	78.7	86.6	87.0	85.5	56.7	3.5
Property:							
Land	34.3	33.6	32.4	27.8	27.8	12.7	2.4
Buildings	354.0	349.6	325.7	289.9	262.7	157.7	14.1
Machinery and equipment	1,791.4	1,755.3	1,663.1	1,529.6	1,295.7	678.7	49.9
Phosphate deposits	11.6	11.4	10.6	10.0	9.8	6.2	1.0
Producing oil and gas properties	107.2	102.4	100.0	97.9	94.7	74.9	—
Undeveloped oil and gas leaseholds	8.4	7.3	7.4	7.6	8.2	12.8	—
Accumulated depreciation, etc.	*1,237.7*	*1,140.2*	*1,010.8*	*886.9*	*786.0*	*338.8*	*30.3*
Accumulated depletion	*45.0*	*42.2*	*40.0*	*38.8*	*36.6*	*24.4*	*.2*
Net property	1,024.2	1,077.2	1,088.4	1,037.1	876.3	579.8	36.9
Deferred Charges	28.5	33.8	28.1	31.9	28.1	9.3	.5
	$1,895.3	$1,848.7	$1,855.9	$1,775.5	$1,527.0	$965.5	$77.0

(1) After deduction of tax notes of $13.1 million.
Italics indicate deduction.
The years 1964 through 1967 have been restated as described on pages 17 and 18 of the Financial Review.

AND SUBSIDIARIES

CONSOLIDATED FINANCIAL POSITION

(In millions)

LIABILITIES

	1968	1967	1966	1965	1964	10 YEARS AGO 1958	25 YEARS AGO 1943
Current Liabilities:							
Accounts payable and accruals......	$ 207.6	$ 187.1	$ 194.5	$ 198.6	$ 155.8	$ 74.8	$ 7.6
Income taxes........................	47.7	50.6	62.2	60.0	75.9	35.7	(1)1.4
Current portion of long term debt....	11.8	10.1	17.2	9.8	10.5	13.2	—
	267.1	247.8	273.9	268.4	242.2	123.7	9.0
Notes, Debentures, etc.................	432.9	451.4	480.4	467.5	345.5	295.8	—
Other Liabilities and Deferred Credits:							
Deferred income taxes..............	36.6	38.4	41.9	43.1	36.6	30.3	—
Miscellaneous.......................	8.8	9.5	7.2	9.8	3.4	3.5	4.3
	45.4	47.9	49.1	52.9	40.0	33.8	4.3
Minority Interests in Subsidiaries.....	24.1	23.0	27.9	26.8	25.7	20.4	2.5
Shareowners' Equity:							
Preference shares....................	—	—	—	—	—	—	21.0
Common shares.....................	66.0	65.9	64.6	63.3	61.7	51.6	12.4
Paid-in surplus......................	579.3	581.1	551.4	524.6	466.6	195.1	11.5
Retained earnings..................	480.5	431.6	408.6	372.0	345.3	245.1	16.3
	1,125.8	1,078.6	1,024.6	959.9	873.6	491.8	61.2
	$1,895.3	$1,848.7	$1,855.9	$1,775.5	$1,527.0	$965.5	$77.0

DSW 020718

MONSANTO COMPANY

HISTORICAL STATEMENT OF CONSOLIDATED INCOME

(In millions except per share earnings)

	1968	1967	1966	1965	1964	10 YEARS AGO 1958	25 YEARS AGO 1943
Net Sales	$1,792.9	$1,637.5	$1,617.0	$1,473.2	$1,362.8	$772.2	$90.4
Cost of Goods Sold	1,324.6	1,214.6	1,183.2	1,043.2	943.0	557.6	66.3
Gross Profit	468.3	422.9	433.8	430.0	419.8	214.6	24.1
Less:							
Selling and administrative	179.6	162.8	157.8	150.4	135.2	66.9	5.5
Research, development, patent and engineering	86.3	84.2	76.0	69.9	66.8	30.8	2.2
	265.9	247.0	233.8	220.3	202.0	97.7	7.7
Operating Profit	202.4	175.9	200.0	209.7	217.8	116.9	16.4
Income Charges — Net	11.5	1.9	8.3	6.5	3.3	15.6	(.9)
Income Before Income Taxes	190.9	174.0	191.7	203.2	214.5	101.3	17.3
Provision for Income Taxes	82.1	68.9	78.6	79.8	99.2	48.6	12.0
Net Income	$ 108.8	$ 105.1	$ 113.1	$ 123.4	$ 115.3	$ 52.7	$ 5.3
Per Common Share:							
Adjusted for splits	$ 3.30	$ 3.19	$ 3.50	$ 3.90	$ 3.73	$ 2.04	$ .39
Adjusted for splits and stock dividends	3.30	3.19	3.43	3.75	3.52	1.72	.31

The years 1964 through 1967 have been restated as described on page 17 of the Financial Review.

DSW 020719

AND SUBSIDIARIES

OTHER DATA

(In millions except where italicized)

	1968	1967	1966	1965	1964	10 YEARS AGO 1958	25 YEARS AGO 1943
Plant additions and replacements	$ 132.9	$ 160.4	$ 211.0	$295.3	$218.1	$ 81.4	$ 3.7
Depreciation, depletion, etc.	$ 172.8	$ 162.9	$ 152.4	$133.5	$120.3	$ 67.1	$ 6.6
Dividends a common share(1)	*$1.65*	*$1.60*	*$1.60*	*$1.45*	*$1.25*	*$1.00*	*$.25*
Book value a common share(1)	*$34.11*	*$32.72*	*$31.71*	*$30.34*	*$28.31*	*$19.06*	*$3.60*
Common shares(1)	33.0	33.0	32.3	31.6	30.9	25.8	11.2
Preference shares	—	—	—	—	—	—	*210,000*
Working capital	$ 495.6	$ 411.2	$ 378.9	$351.1	$294.9	$196.0	$27.1
Long term debt (less current maturities)	$ 432.9	$ 451.4	$ 480.4	$467.5	$345.5	$295.8	—
Shareowners' equity	$1,125.8	$1,078.6	$1,024.6	$959.9	$873.6	$491.8	$61.2
Employes(2)	*59,849*	*58,889*	*57,737*	*56,317*	*52,372*	*33,272*	*11,341*
Shareowners	*111,538*	*111,363*	*95,938*	*93,538*	*89,833*	*66,427*	*10,331*

(1) Adjusted for splits.
(2) Includes Monsanto employes in plants operated for U.S. Government (1,802 in 1968).
The years 1964 through 1967 have been restated as described on page 17 of the Financial Review.

DSW 020720

MONSANTO'S WORLDWIDE INTERESTS

This list of Monsanto's principal equities beyond U. S. borders gives some indication of the scope of the company's operations. Per cent ownerships, in some cases rounded to the nearest whole number, are shown parenthetically.

NORTH AMERICA

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

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

MEXICO: Monsanto Mexicana S.A. (100%) produces chemicals, plastics raw materials and building products. A subsidiary makes plastic consumer products.

CENTRAL AND SOUTH AMERICA

ARGENTINA: *Monsanto Argentina* S.A.I.C. (100%) manufactures chemicals and plastics raw materials.

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

PANAMA: Monsanto Overseas S.A. (100%) handles certain investments and licensing outside the United States.

PUERTO RICO: Chemstrand Overseas S.A. (100%) markets *man-made* fibers in areas other than Europe; handles certain investments outside the United States.

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

EUROPE AND MIDDLE EAST

BELGIUM: Monsanto Europe S.A. (100%) supervises investments and marketing activities throughout Europe; produces plastics and chemicals.

FRANCE: Societe Monsanto (100%) makes plastics raw materials and plastic containers.

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

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

SPAIN: Alscondel S.A. (50%) makes consumer products of plastics. A subsidiary produces chemicals and plastics raw materials.

UNITED KINGDOM: Lansil Ltd. (100%) produces acetate flake and yarn, textile fabrics and apparel.

Monsanto Chemicals Ltd. (67%) manufactures chemicals, plastics and plastics raw materials. Major subsidiaries produce plastics for construction and packaging.

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

Monsanto International Finance Company (100%) was established to obtain funds for expansion, primarily in the United Kingdom and Continental Europe.

Regional Vice Presidents	
Western Region ROY L. BRANDENBURGER	Southern Region M. R. DALTON
Eastern Region RICHARD T. CLARK	North Central Region DANIEL J. MURPHY
Governmental Affairs SAM PICKARD	

ASIA AND AUSTRALIA

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

Monsanto Chemicals (Australia) Ltd. (85%) makes chemicals and plastics raw materials. An associate produces fluorocarbons.

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

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

Monsanto's participation in international commerce and trade is further revealed in this listing of companies engaged in various activities on a more modest scale than those listed above. Omitted entirely are almost 100 sales agencies representing Monsanto in most parts of the world.

Lomond Ltd. — Hong Kong
Monoil Indonesia, Inc. — Indonesia
Monoil Netherlands, Inc. — The Netherlands
Monoil UK, Inc. — United Kingdom
Monsanto Agricola de Nicaragua S.A. — Nicaragua
Monsanto Centroamerica (El Salvador) S.A. — El Salvador
Monsanto Centroamerica (Guatemala) S.A. — Guatemala
Monsanto Chemicals of India Private Ltd. — India
Monsanto *Chile Comercial e Industrial* Ltda. — Chile
Monsanto Comercio e Industria Ltda. — Brazil
Monsanto (Deutschland) GmbH — West Germany
Monsanto Export Co. — Dominican Republic
Monsanto GmbH — Austria
Monsanto Italiana S.p.A. — Italy
Monsanto Japan Ltd. — Japan
Monsanto (Nicaragua) S.A. — Nicaragua
Monsanto N.V. — The Netherlands
Monsanto Oils Ltd. — Canada
Monsanto Philippines, Inc. — Philippines
Monsanto *Research* S.A. — Switzerland
Monsanto (Scandinavia) A.B. — Sweden
Monsanto South Africa (Pty.) Ltd. — South Africa
Monsanto (Suisse) S.A. — Switzerland
Monsanto Thailand Ltd. — Thailand
Monsanto (Venezuela) C.A. — Venezuela
Monsel Electronic Instruments Ltd. — Israel
Sidaplax N.V. — Belgium
Sinteticos Slowak S.A. — Uruguay

DSW 020721

DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

CHARLES H. SOMMER, *Chairman*	St. Louis
DILLON ANDERSON	Houston
EDWARD J. BOCK	St. Louis
DAVID R. CALHOUN	St. Louis
FREDRICK M. EATON	New York
JOHN L. GILLIS	St. Louis
HERBERT HOOVER JR.	Los Angeles
EDWARD A. O'NEAL	St. Louis
JAMES S. ROCKEFELLER	New York
CHARLES ALLEN THOMAS	St. Louis
MONTE C. THRODAHL	St. Louis

CORPORATE DEVELOPMENT COMMITTEE

EDWARD J. BOCK, *Chairman*

H. HAROLD BIBLE — EDWIN J. PUTZELL JR.

JOHN L. GILLIS — CHARLES H. SOMMER

MONTE C. THRODAHL

EXECUTIVE COMMITTEE

EDWARD J. BOCK, *Chairman*

JOHN L. GILLIS — EDWARD A. O'NEAL

CHARLES H. SOMMER

Transfer Agents

MORGAN GUARANTY TRUST COMPANY OF NEW YORK

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

EDWARD J. BOCK	*President and Chief Executive Officer*
CHARLES H. SOMMER	*Chairman of the Board*
JOHN L. GILLIS	*Senior Vice President*
MONTE C. THRODAHL	*Vice President*

JOHN R. ECK	*Group Vice President*
JAMES D. MAHONEY	*Group Vice President*
TOM K. SMITH JR.	*Group Vice President*

H. HAROLD BIBLE	*Vice President*
WILLIAM H. BROMLEY	*Vice President*
JAMES E. CRAWFORD JR.	*Vice President*
PATRICK J. DOWD	*Vice President*
FINIS MORGAN	*Vice President*
EDWIN J. PUTZELL JR.	*Vice President*
FRANCIS E. REESE	*Vice President*
ROBERT R. RUMER	*Vice President*
J. RUSSELL WILSON	*Vice President*

LEWIS F. STEINBACH	*Controller*
EDWIN J. PUTZELL JR.	*Secretary*
PATRICK J. DOWD	*Treasurer*

JACK W. MUELLER	*Assistant Controller*
FRANCIS A. STROBLE	*Assistant Controller*
WALTER C. THILKING	*Assistant Controller*
RODNEY HARRIS JR.	*Assistant Secretary*
C. BRENT HOLLERAN	*Assistant Secretary*
FRANKLIN C. REHFELD	*Assistant Secretary*
LEWIS L. BASELER	*Assistant Treasurer*
NORVELL G. JONES	*Assistant Treasurer*
J. ROBERT MATLOCK	*Assistant Treasurer*
WALTER J. NABER JR.	*Assistant Treasurer*
THOMAS M. RASMUSSEN	*Assistant Treasurer*

Feb. 24, 1969

DSW 020722

STLCOPCB4006031

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

DSW 020723