

1965 ANNUAL REPORT
MONSANTO COMPANY

MONS 352149

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FINANCIAL HIGHLIGHTS

(Dollars in Millions, Except Per Share Figures)

	1965	1964
Earnings a Share	$ 3.89	$ 3.72
Cash Dividends a Share	1.45	1.25
Stock Dividend	2%	2%
Income:		
Net sales	$1,468.1	$1,358.7
Interest, dividends, etc.	16.1	15.7
	1,484.2	1,374.4
Costs of Doing Business:		
Raw materials, fuel, supplies, etc.	751.4	681.0
Wages and salaries to employes	343.9	313.6
Depreciation, depletion, etc.	133.5	120.3
Taxes (income, property, etc.)	111.4	127.3
Interest expense	18.9	15.5
Minority interests in subsidiaries	2.1	1.8
	1,361.2	1,259.5
Net Income	123.0	114.9
Cash Dividends Paid	44.8	37.6
Retained for Future Growth	$ 78.2	$ 77.3
Per Cent of Sales:		
Gross profit	29.2%	30.8%
Selling and administrative expenses	10.2	9.9
Research, development, patent, engineering	4.8	4.9
Net income	8.4	8.5
Plant Additions and Replacements	$ 295.2	$ 218.1
Investment in Affiliated Companies	1.1	13.3
Long Term Debt (Exclusive of Current Maturities)	$ 467.5	$ 345.5
Shareowners' Equity	957.5	871.7
Equity to debt ratio	2.05	2.52
Common Shares (In Millions)	31.6	30.9
Book Value a Common Share	$ 30.27	$ 28.25
Working Capital	$ 350.1	$ 294.1
Current Assets to Current Liabilities Ratio	2.31	2.22
Employes	56,227	52,284
Shareowners	93,538	89,833

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TO THE SHAREOWNERS

Taking advantage of a vigorous economy and a more favorable U.S. tax climate for domestic operations, our company in 1965 achieved another record year and prepared itself for future growth. Advancing to new levels were such traditional indicators as sales, net income, per-share earnings and dividends paid to shareowners. Yet, all expectations for the year were not achieved, as reflected in a decline in pretax income.

Consolidated sales totaled $1,468,147,000, which represented a year-to-year increase of 8 per cent. Although pretax income was down 5 per cent, net income was up 7 per cent to $122,967,000. Earnings came to $3.89 a share on 31,634,357 shares outstanding, compared to $3.72 a share on 30,859,927 shares in 1964.

In the fourth quarter, the Board of Directors voted to increase the quarterly dividend rate from 35 to 40 cents a share.

Tabulations in the adjoining column, which reflect some of our disappointments as well as some of our achievements, indicate how various factors contributed to, or limited, the 1965 earnings increase. The effect on earnings of the higher costs of starting up plants, especially some involving new technology, was so appreciable that it is listed separately for the first time.

Two other operating factors caused a drag on earnings. The decline in selling prices in some product groups not only continued but intensified. In line with the company's growth, the costs of administrative, marketing and technological activities rose in 1965, but the year-to-year increase was less pronounced than in 1964.

Higher sales provided the major stimulus for the year's gains. Abroad, as well as in the United States, most major products were in firmer demand. Sales

Italics in the text of this Annual Report indicate Monsanto trademarks.

The year-to-year increase in earnings of 17 cents a share is accounted for as follows:

	Earnings a Share		
Year 1964 earnings			$3.72
Reductions in earnings caused by:			
Lower selling prices	$.37		
Higher start-up costs	.26		
Higher selling, administrative, research, development and other expenses	.23		
		.86	
Additional earnings resulting from:			
Higher sales volume	$.49		
Manufacturing cost savings	.23		
Lower raw material prices	.01	.73	
Decrease in operating results			.13
			3.59
Nonoperating items:			
Higher investment tax credit on property additions		.26	
Lower income taxes, due primarily to difference in tax rate		.14	
Profit on sale of land		.07	
Higher interest costs	.05		
Higher other income charges	.02	.07	
Effect on earnings of shares issued during the year		.10	.30
Year 1965 earnings			$3.89

Italics indicate deduction.

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beyond U.S. borders amounted to $311 million, compared to sales of $286 million in 1964.

Monsanto also benefitted in 1965 from newly instituted manufacturing economies. Such savings, which affect earnings so dramatically, are a satisfying reward for the careful planning and hard work that made them possible.

Two nonoperating items in the earnings analysis are of special significance. These are lower income taxes and higher tax credit on investments, the latter reflecting the company's high level of capital expenditures.

Looking beyond the year's gains in sales and earnings, Monsanto's management views as particularly significant the big investment the company made in its future. Perhaps 1965 is best characterized as a year of record expansion into promising areas, many of them new to the company.

Capital outlays for plant and equipment far exceeded those of any prior year. They totaled $295,160,000, which was 35 per cent higher than the previous record expenditures of $218,105,000 in 1964. Investments in affiliates amounted to $1,126,000 in 1965 and $13,340,000 a year earlier.

Here are some major projects for which expansion capital was spent:

Using new technology, Monsanto (1) became the world's first large-scale producer of an organic chemical (a nylon-yarn intermediate) by an electrolytic process, (2) began commercial production of *Ramrod* weed killer, (3) established itself as a producer of polyester fibers, (4) opened a plant to provide dyeing and finishing services to the textile industry, (5) completed the first part of a two-phase expansion that will add more than 280 million pounds to annual capacity for acrylonitrile — a basic raw material for production of *Acrilan* acrylic fiber, nylon yarn and certain plastics — and (6) increased its ammonia capacity by one-third.

Other projects completed in 1965 included a nylon-yarn plant in Luxembourg; units for making cyclamate sweeteners, ammonium phosphate, and cold-water soluble fumaric acid for flavoring processed foods; and expansions involving acrylic fibers, saccharin, bulk aspirin, detergent phosphates, and a number of plastics resins and raw materials.

In various phases of construction at year-end were a nylon-yarn plant in Scotland; an enlargement of facilities for producing *Acrilan* acrylic fiber in Northern Ireland; and, domestically, a major expansion of phosphorus capacity.

Much of the required capital for this enormous expansion program is being generated internally. The balance has been arranged through outside financing.

In February, 1965, a group of U.S. banks agreed to lend the company $100 million, $75 million of which was taken down during the year. In addition, Monsanto in 1965 formed a subsidiary to help raise capital to finance overseas projects, primarily in the United Kingdom and continental Europe. In the fourth quarter this new subsidiary, Monsanto International Finance Company, successfully raised $25 million outside the United States through a sale of debentures which give buyers the option of future conversion into Monsanto Company common stock. In keeping with the government's desire to strengthen the U.S. balance-of-payments position, the debentures were offered only to purchasers abroad. Additional funds of $32,776,000 were borrowed by overseas affiliates in their local currencies.

Although most of 1965's operational highlights are detailed later in this Annual Report, a few merit mention here.

Indicative of a significant trend in our business, the agricultural chemicals group has become our fastest growing product area. In 1960, in terms of sales it was seventh largest of Monsanto's 11 product groups. By 1965, it had become fourth largest. Indications are that the growth trend will continue and that direct sales to farmers will represent an increasingly important market.

Growth in plastics was aided by a Monsanto improvement in the plastic interlayer for laminated safety glass. In windshields of 1966-model automobiles it gives motorists increased protection in the event of highway mishap.

Also noteworthy is the important role our company played in helping detergent makers convert quickly to so-called biodegradable intermediates which minimize detergent-linked foaming that formerly plagued U.S. surface waters. Monsanto supplied

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the first commercial shipments of these intermediates and is now a leading producer of them. Another significant development in 1965 was our attainment of a basic raw-material position in salt.

In March, at the 1965 Annual Meeting, Edgar M. Queeny stepped down as chairman of the Finance Committee. Mr. Queeny, the son of Monsanto's founder, and a former president and board chairman, remains on the board and the Finance Committee.

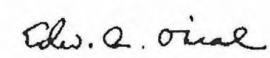
Charles Allen Thomas retired from the board chairmanship, a post he had held since 1960. He continues as a director and was elected chairman of the Finance Committee. He is also chairman of the Technical Committee.

At the same time, the board elected Edward A. O'Neal chairman of the board to succeed Dr. Thomas.

Later in the year, Vice President Edward J. Bock was elected a director of Monsanto and a member of the Executive Committee. Mr. Bock had been general manager of the Inorganic Chemicals Division.

We wish to conclude this letter by acknowledging our appreciation to Monsanto people all over the world for their contributions to the progress of our company.

Sincerely,



Chairman of the Board



President

St. Louis
February 21, 1966

The next annual meeting of the shareowners of the company is to be held at 10 a.m. Thursday, March 24, 1966, 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.

COMPARATIVE CONSOLIDATED SALES INCOME AND EARNINGS A SHARE BY QUARTERS

	1965	1964	Per Cent Increase Decrease
	(In Thousands)		
SALES:			
First quarter	$ 358,703	$ 324,414	10.6
Second quarter	384,309	358,898	7.1
Third quarter	356,547	326,957	9.1
Fourth quarter	368,588	348,409	5.8
	$1,468,147	$1,358,678	8.1
INCOME:			
First quarter	$ 34,194	$ 28,696	19.2
Second quarter	38,791	35,285	9.9
Third quarter	25,169	23,023	9.3
Fourth quarter	24,813	27,887	11.0
	$ 122,967	$ 114,891	7.0

	1965	1964	
		Adjusted for 1965 Stock Dividend	As Reported
EARNINGS A SHARE (1):			
First quarter	$1.08	$ .91	$ .93
Second quarter	1.23	1.12	1.14
Third quarter	.79	.73	.75
Fourth quarter	.79	.89	.90
	$3.89	$3.65	$3.72

SHARES OUTSTANDING DECEMBER 31:

1965 31,634,357
1964 30,859,927

(1) Restated for the first three quarters of 1965 to reflect the shares outstanding on December 31.

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1965 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. Information is classified according to Monsanto's 11 product groups and treated on a worldwide basis.

CHEMICAL FIBERS

Chemstrand's fibers moved in record volume. Their year-to-year gain in sales amounted to 7 per cent.

Industry-wide demand for acrylic, nylon and polyester fibers is expected to extend its rapid growth through at least the 1960s. Five-year projections indicate that the industry will have to make major expansions if it is to meet a world demand for the three fibers which is expected to total nine billion pounds a year by 1970. This is 2.5 billion pounds in excess of the installed capacity expected at the end of 1966.

Since 1960, consumption of acrylic fibers by rug and carpet makers has increased eightfold. And another doubling is expected by 1970. Monsanto is participating strongly in this growth. In 1965, the company's sales of *Acrilan* acrylic fiber to the carpet industry gained particularly well. Sales also benefitted in 1965 as a result of a "Warm Coat" merchandising program in behalf of outerwear containing the fiber in pile and fleece forms. Capacity to make *Acrilan* acrylic fiber was doubled in Decatur, Ala., and was being doubled in Northern Ireland.

The popularity and use of nylon, oldest of the man-made noncellulosic fibers, continued to increase. Its total U.S. market is expected to grow about 50 per cent in the next five years. And overseas markets, particularly in the United Kingdom and Western Europe, are expected to expand even faster.

In 1965, Monsanto's sales of nylon gained well in such important markets as tires, industrial fabrics, upholstery, hosiery and texturing applications. Yarns for texturing were in especially strong demand for use in stretch garments, which have been promoted heavily under the company's *Actionwear* trademark.

Monsanto's new nylon-yarn plant in Luxembourg began producing late in 1965. In Dundonald, Scotland, another nylon-yarn plant is scheduled for completion in 1966. In the United States, new facilities for making nylon polymers were added in Greenwood, S.C.

The Decatur plant in 1965 began producing a key nylon-yarn intermediate by a patented electrochemical process discovered and developed by Monsanto. The new method, which, for the first time, enables the company to make both nylon yarn and *Acrilan* acrylic fiber from the same acrylonitrile starting material, will result in manufacturing economies.

Sales of spandex stretch yarns increased during the year. Such uses as foundation garments, brassieres, and hosiery tops represent important uses for the product.

The company entered a major market late in the year when production of polyester fibers got under way in Decatur. Addition of polyester to the Chemstrand line signficantly enhances Monsanto's already strong position in the apparel market. Polyester fibers now go mainly into clothing of polyester-cotton blends. The U.S. market for such fabrics, which used about 250 million pounds of polyester in 1965, is expected to more than triple within five years. This growth pattern reflects increasing demand for apparel with crease resistance and wash 'n' wear qualities.

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In Orangeburg, S.C., construction was completed on a new plant which offers the textile industry dyeing and finishing services on polyester-cotton blends and other textile fabrics.

PLASTICS, RESINS AND COATINGS

Total demand for Monsanto plastics — including raw materials, resins and finished products — was greater than ever. Sales increased 7 per cent as the company's network of plastics-producing plants in nine countries ran at near capacity.

There was continuing emphasis on sophisticated plastics, the specialized performance of which enabled them to extend their markets. For example, *Lustran* acrylonitrile-butadiene-styrene (ABS) polymers strengthened their position in such end uses as refrigerators, appliance housings, pipe and luggage.

A transparent form of *Lustran* styrene-acrylonitrile (SAN) polymer was introduced for making automobile instrument lenses. And heat-resistant forms of *Lustrex* polystyrene gained ground in the fast-growing market for plastic packages.

Capacity for *Lustran* was enlarged in Addyston, Ohio. Other expansions involving the same tough plastic occurred in France and the United Kingdom. A new unit to make the product is scheduled for early 1966 start-up in Canada.

These expansions increased Monsanto's need for styrene monomer, principal raw material for both *Lustran* and *Lustrex* plastics, and new monomer capacity was added in Texas City, Tex.

Demand for low-density polyethylene ran ahead of capacity in the first half of the year. Prices strengthened accordingly. Monsanto's product mix was upgraded, and new sales of polyethylene for insulating wire and cable was one result.

CONSOLIDATED SALES BY PRODUCT GROUPS

PER CENT INCREASE 1965 OVER			PER CENT OF TOTAL		
1964	1960		1965	1964	1960
7	103	Chemical Fibers	28.6	29.1	23.6
7	93	Plastics, Resins and Coatings	25.1	25.2	21.7
2	34	Phosphates and Detergents	9.6	10.1	12.0
32	141	Agricultural Chemicals	9.0	7.4	6.3
10	33	Intermediates and Plasticizers	8.9	8.7	11.2
1	24	Rubber and Oil Chemicals	6.1	6.6	8.3
2	19	Petroleum — Net of purchases	4.7	5.0	6.6
15	32	Fine Chemicals and Food Ingredients	2.9	2.7	3.6
3	15	Textile and Paper Chemicals	2.4	2.5	3.5
5	16	Heavy Chemicals	2.0	2.1	2.9
—	—	Other	.7	.6	.3
			100.0	100.0	100.0

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Another 1965 introduction was a polyethylene for high-speed extrusion coating of packaging materials. It already has gained wide acceptance in the United States and the United Kingdom. Also in the United Kingdom, the company began marketing a new ethylene-vinyl acetate copolymer, one use of which is in flexible hose for food processing.

Monsanto's vinyl plastics, including film, were virtually in a sold-out position. In the United States, a clear form of *Vyram* rigid polyvinyl chloride was introduced for molded bottles to package a variety of products. A form of *Vyram* for making pipe was marketed for the first time in Argentina, Canada and Mexico. And polyvinyl chloride expansions occurred at Monsanto plants in all three countries, as well as in the United States.

The company's plastic building products, made mostly of *Vyram*, bettered their year-earlier sales with panels and residential siding particularly strong. Yet, building products did not move in hoped-for volumes.

Sales volume of the Mexican plant that produces plastic housewares, containers and appliance parts approximated that of the prior year. Also in Mexico, the company started making corrugated vinyl panels. In England, there was an expansion of facilities for fabricating plastic building products.

Anticipating a continuing high level of automobile production and an increasing demand for greater driving safety, Monsanto speeded its development of an improved plastic interlayer for laminated safety glass. The new product, a form of *Saflex* polyvinyl butyral, materially increased sales and added to driving safety by giving windshields extra strength and resilience. The improved windshields already have become standard among U.S. and Canadian auto makers.

At the Chocolate Bayou Plant near Alvin, Tex., a new unit in 1965 began producing phenolic resin adhesives. Successful product introductions included a line of plywood adhesives for hard-to-bond southern pine.

Among Monsanto's innovations in plastics packaging were glass-clear containers made of polyvinyl chloride; a package for mustard featuring easy, one-hand dispensing; a vinyl bottle suitable for oily foods; an embossed, translucent cup for cold-drink vending; a cottage-cheese tub thermoformed from a specially tailored resin; and a transparent meat tray affording shoppers easy inspection of prepackaged meat and poultry.

In 1965, a new plant to produce nestable cups and other containers neared completion in Bridgeview, Ill.

PHOSPHATES AND DETERGENTS

The group's sales were 2 per cent higher than in the prior year. Production of phosphorus and its derivatives topped all earlier records.

Expansions and process improvements are under way at Monsanto's phosphorus plants in Columbia, Tenn., and Soda Springs, Idaho. At the latter site the world's largest furnace for making elemental phosphorus is being installed. It is scheduled for early 1966 start-up.

The soap and detergent industry's good year was reflected in record sales of Monsanto's detergent ingredients. These include phosphate salts (the so-called detergent builders) and the compounds known as detergent actives. Among the latter are the company's alkyl benzenes, one of the biodegradable raw materials to which detergent makers switched in 1965. With the help of Monsanto and other producers, the conversion to biodegradables was completed by June, six months ahead of schedule.

Also in 1965, Monsanto introduced other new biodegradable actives developed especially for use in controlled-suds detergents.

ACL solid, chlorine-bearing chemicals for use in dry bleaches and swimming-pool disinfectants showed a year-to-year sales increase.

Phosphorus intermediates, used in oil additives and insect killers, moved in good volume. Installation of additional capacity to make them was completed in Monsanto, Ill., and is under way in Anniston, Ala.

Sales of a new type of phosphate-based leavening agents first marketed to makers of prepared baking

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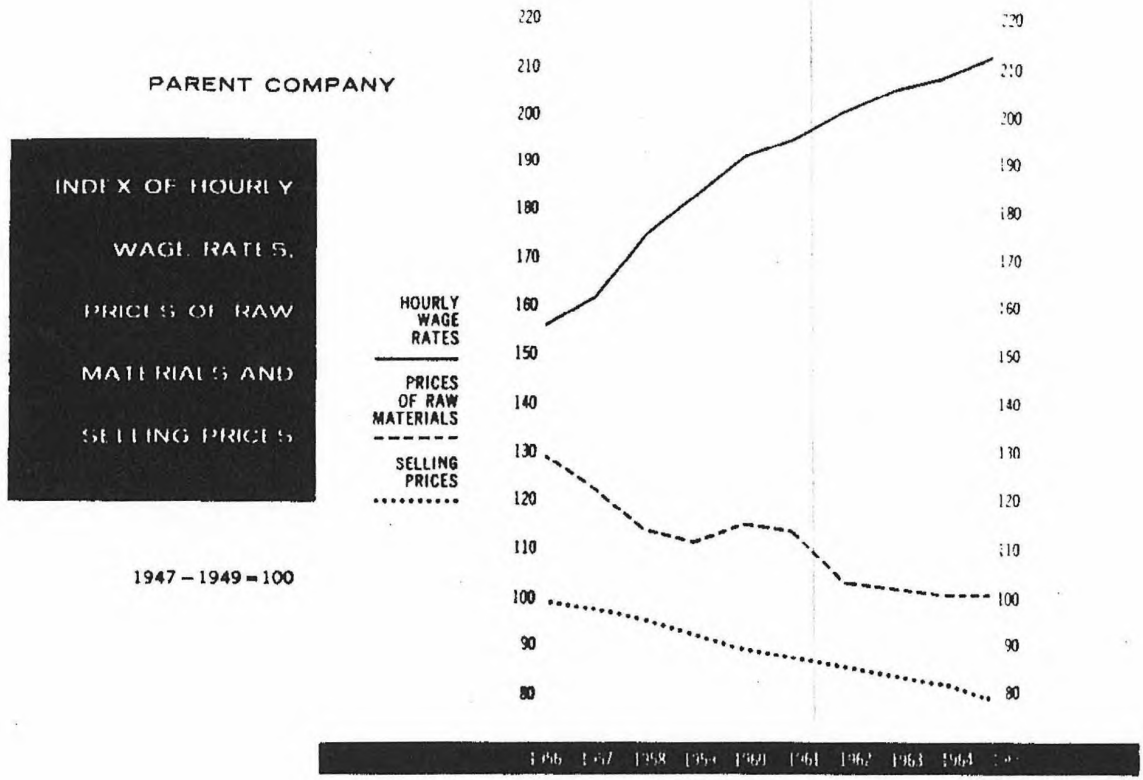

mixes in 1963 continued to increase. Their 1965 gain far exceeded that of the market in which they compete.

Phos-Chek fire retardant for combating forest fires came into wider use in 1965. New techniques of applying it from ground tankers and fire engines (in addition to regular airplane drops) were tested successfully in Australia, Canada and the United States.

AGRICULTURAL CHEMICALS

Farm chemicals, which had a 32 per cent sales increase, showed the largest year-to-year gain of all the product groups.

Domestic business benefitted from greater food consumption and a healthy farm economy. Active 1965 markets reflected better use of technology, continuing weed and insect problems and steadily increasing fertilizer usage.

Marketing efforts were supported by innovative programs to merchandise Monsanto's agricultural know-how to growers. Farm tours, informational meetings and strategically placed demonstration fields helped illustrate the effectiveness and profitability of the company's techniques and products. Proven scientific methods — spectographic analysis of plant tissue, for example — were used to determine the precise nutritional needs of customers' crops.

Plant-food materials — including ammonia, ammonium nitrate and related fertilizer products — sold in record volume through hundreds of outlets.

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MONSANTO'S DIVISIONS

The company in 1965 had these eight divisions: Agricultural Division, Chemstrand Company Division, Hydrocarbons & Polymers Division (formerly the Hydrocarbons Division), Inorganic Chemicals Division, International Division, Organic Chemicals Division, Packaging Division and Plastic Products & Resins Division (formerly the Plastics Division).

Production of fertilizer materials was expanded at three U.S. plants. The most significant expansion was a doubling of ammonia capacity in Luling, La., where Monsanto now has the largest computer-controlled unit for ammonia production in the United States and the first anywhere to employ a new engineering concept in high-efficiency ammonia production.

Also in Luling, Monsanto increased ammonium nitrate capacity and started making ammonium phosphate, another widely used plant food. The latter product is being manufactured in a new unit with a capacity of 240,000 tons a year.

To the network of Monsanto-owned and independent outlets for farm chemicals were added 45 Monsanto Agricultural Centers. The centers, which numbered 120 at year-end, sell fertilizers, insecticides and herbicides direct to growers in prime U.S. farm regions.

Pesticides made strong sales gains, with overseas markets accounting for about one-third of total business. Looking toward future growth, Monsanto is testing pesticidal formulations on five continents.

Sales of *Randox* weed killer doubled for the third year in a row. *Ramrod* herbicide, a companion product to *Randox*, was introduced in the U.S. Corn Belt with outstanding first-year success. There are plans to broaden the distribution of *Ramrod* in the United States in 1966 and, at the same time, introduce it to Canadian and European growers. Late in 1965, facilities to make *Ramrod* were completed in Muscatine, Iowa.

Production capacity for *Rogue* weed killer was doubled as sales to rice growers gained strongly. U.S. demand for *Avadex* wild-oat killer was overshadowed by large-volume use in Australia, Canada, Europe and Latin America. Proof that autumn application of *Avadex* gives weed control through the next year sparked new interest in the product.

Demand for Monsanto's parathions to control insects in cotton, fruit and vegetable crops outpaced supply despite earlier capacity boosts. The company scheduled a 1966 expansion to help ease the situation. A new parathion-formulating plant in Guatemala enabled Monsanto to increase its sales in Central America.

Animal-nutrition products moved well. *MH-1* protein supplement for poultry rations showed especially good improvement. Domestic business got a boost when rising costs of other meats influenced American housewives to serve more chicken.

In overseas markets *Santoquin* antioxidant, which preserves the nutritive values of feeds, was a big gainer. New business included treatment of fish meal, an important feed material, to prevent oxidation during long storage.

INTERMEDIATES AND PLASTICIZERS

Most of the group's products were in firm demand. Total sales increased 10 per cent.

Phenol and other intermediates in the group are utilized in manufacturing other chemicals. Monsanto makes intermediates mainly to insure ample, low-cost supplies for its own use. Since the company's capacity exceeds its needs, however, large volumes are also marketed.

World demand for intermediates is expected to go on rising for at least the next five years. Monsanto — a producer in the United States, continental Europe, the United Kingdom and elsewhere — should benefit.

Plasticizers, used mainly to improve the properties of plastics, moved in record volume. High levels

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of activity in the automotive and building industries, each a major user of plastics, helped spur the gain. So did increasing popularity of embossed vinyl-asbestos floor tile, largest outlet for *Santicizer* 160 primary plasticizer.

During the next five years more than half the projected growth in plasticizer sales is expected to occur beyond U.S. borders. European demand for *Santicizer* 160 is already heavy enough to justify a production unit now being built in Antwerp, Belgium.

Several plasticizers were added to the Monsanto line in 1965. One is used in tough, yet soft, plastic and rubber compounds for such automotive applications as upholstery, trunk liners, side panels and floor pads. Another is for acrylic lacquers to provide durable, transparent coatings for protecting metal structures exposed to weather.

Resin materials represent an area of particularly intense competition caused by excess capacity. Despite this problem, sales increased.

There were encouraging signs that demand for phthalic anhydride is rapidly catching up to active capacity. The big-volume product — a key ingredient of paints, industrial finishes and reinforced plastics — has been in oversupply for years.

Functional fluids remained a fast-growing segment of the company's business. These products are used as hydraulic fluids, heat-transfer agents, lubricants and — in electrical equipment — as insulators. Each has outstanding fire resistance and thermal stability.

Skydrol fire-resistant hydraulic fluid for aircraft, in 15 years of use, has flown 35 million miles with no failures. Safety-conscious aircraft manufacturers and airlines the world over now accept it as a standard. Monsanto maintained its position by developing new fluids to meet the more severe temperature and pressure conditions imposed by higher-flying, faster aircraft and by smaller, more powerful hydraulic systems.

An extremely active industrial construction market helped increase sales of dielectric fluids to makers of capacitors and transformers. A new, low-priced form of *Pydraul* fire-resistant hydraulic fluid was well received in the metalworking industry. A new heat-transfer fluid was used successfully in tankcar heating systems to keep pitch, sulfur and other chemicals molten during shipment. And another Monsanto heat-transfer fluid is being checked out as a possible means for making nuclear power stations simpler and less expensive.

RUBBER AND OIL CHEMICALS

The group's total sales were 1 per cent above year-earlier levels.

Long-time growth in the market for synthetic rubber was thrown off stride by price cuts in natural rubber. Styrene monomer, a principal ingredient of the synthetic product, only approximated its 1964 sales to rubber companies. But butadiene, another synthetic-rubber ingredient, sold at capacity.

Sales of additives to speed rubber manufacture and improve the durability of automobile tires increased. More than half the total volume was sold outside the United States, the bulk of that coming from plants in England.

Santoflex antidegradants, which protect tires from cracking caused by oxygen and ozone in the air, sold well. One type protects tires in motion; another protects them at rest.

Among recent Monsanto developments are a stabilizer package for synthetic rubber, and special systems for core bonding and vulcanization.

In the petroleum-additives field, Monsanto is rapidly attaining a position of technological leadership. This is particularly true in the important engine-oil market, which represents about 60 per cent of the company's total market for oil chemicals.

As engines have become more powerful and operating conditions have grown more stringent, Monsanto has been a pacesetter in developing suitable additives. Such additives effectively counteract the increased engine rust and carburetor deposits caused by equipment put on new automobiles to control air pollution. They also go into high-grade lubricating oils for highway-construction equip-

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ment, gas-compressor engines and other off-the-road machinery.

PETROLEUM PRODUCTS

Sales of these products were 2 per cent higher. The refinery in El Dorado, Ark., operated at capacity, and there were firmer prices on most of its output.

Wholesale prices of gasoline and fuel oil rose early in the year and stayed above their 1964 levels. Retail sales of gasoline gained 8 per cent, partly a result of intensive promotional effort.

Sales of crude oil and natural-gas liquids were slightly above year-earlier levels. There was a 10 per cent increase in sales of natural gas.

Significant oil and gas discoveries opened new fields in Louisiana and Oklahoma. Development of existing fields in Oklahoma and New Mexico was highlighted by production from new gas wells with immediate markets. Participation in the completion of 84 producing wells gave Monsanto a net gain of 46.96 wells for the year.

FINE CHEMICALS AND FOOD INGREDIENTS

The group, which includes some of the company's earliest products — among them, saccharin — and some of its newest, continued to flourish. Its sales climbed 15 per cent.

Aspirin sales benefitted when the product was offered in a new form to makers of time-release, pain-and-fever relievers. Monsanto is increasing its domestic aspirin capacity about 50 per cent in three stages to keep pace with mounting world demand.

The group's best growth prospects are in the area of food ingredients, where 1965 saw promising progress in new flavor enhancers and nonnutritive sweeteners.

The year's developments included first commercial production of *CWS* cold-water soluble fumaric acid for use in dry beverage bases and fruit-juice drinks. The patented product, which imparts tartness, dissolves much faster than normal fumaric and is much less expensive than citric acid, the traditional acidulant for many food products.

Also in 1965, saccharin capacity was increased and production of *Dietose* sodium and calcium cyclamates began. Less sweet than saccharin, the cyclamates are often combined with it in low-calorie food products. Monsanto is now the only basic supplier of all nonnutritive sweeteners.

TEXTILE AND PAPER CHEMICALS

Sales of chemicals for the manufacture of textiles and papers rose 3 per cent.

Customer sales of acrylonitrile, the group's mainstay, increased and Monsanto itself consumed great volumes in the manufacture of chemical fibers, principal end use for this raw material.

An earlier shortage of acrylonitrile was eased by the completion of the first part of a two-phase installation of new facilities at Monsanto's Chocolate Bayou Plant near Alvin, Tex. The second phase is to be in operation in mid-1966. The two-part expansion will add more than 280 million pounds to the company's yearly acrylonitrile capacity.

Of the many paper chemicals offered by Monsanto, the most important is *Mersize* sizing agent, which improves the water resistance of paper. The product sold well in 1965.

Scripset additive to improve the dimensional stability and printability of offset printing papers also moved in good volume.

Products now under development and being counted on to provide further growth include surface sizes, coating-pigment binders, alkaline sizes and wet-strength agents.

HEAVY CHEMICALS

Sales of heavy chemicals were up 5 per cent for the year.

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Sales of sulfuric acid, a basic raw material for a broad range of industries, increased. Monsanto's four sulfuric units ran at capacity. And the company designed and sold more sulfuric plants for other producers worldwide than in any previous year.

The steel industry in 1965 found benefits in using hydrochloric acid in place of sulfuric under certain conditions in the pickling of steel. Because of this development, Monsanto's sales of hydrochloric gained strongly.

Caustic potash also moved well. The chemical, of which Monsanto is a major U.S. producer, is used in catalytic reactions and as an important raw material in making soaps and detergents, medicinals, and potash salts for various other uses.

Capacity for specialty silica products was expanded to keep up with growing demand. One of the products, *Santocel* silica aerogel, underwent a quality refinement that made it the most efficient flatting agent available for various types of lacquers and varnishes.

Worldwide sales of vanadium catalyst (for sulfuric acid manufacture) far exceeded previous records. Brisk demand for lampblack and bone ash helped sales of those products climb to new peaks.

OTHER PRODUCTS

Silicon was in strong demand. As the year progressed, its sales increased steadily.

Silicon and other semiconductors are essential in the manufacture of electronic devices. In 1965, makers of such devices used more semiconductors than ever in radios, TV receivers, computers and other electronic equipment.

RESEARCH, DEVELOPMENT AND ENGINEERING

Massive technological effort was rewarded in 1965 by significant innovations in Monsanto's products and processes.

Many previously existing product lines were upgraded by the introduction of new models with improved quality and performance. In addition, 43 basic new products were marketed for the first time. Some of these are expected to produce substantial sales volume over the next several years. Others serve mainly to broaden the variety of materials available to Monsanto's customers.

In 1965, the company received 368 U.S. patents and 1,486 foreign patents.

Expenditures for research, development, patent work and basic engineering amounted to $69.9 million, compared to $66.8 million in 1964.

Important forward strides were taken by the Central Research Department into relatively new areas of technology during the year.

For example, new fluids were developed as candidates for the jet-lubricant market. They operate over the incredible temperature range of 40 degrees below to 445 degrees above zero.

The department is developing a new, integrated approach to the design, function, fabrication and chemical properties of heavy-duty plastic products. The goal is to eliminate several conversion operations, making possible the one-step production of complex shapes from very simple chemicals.

The company's research work in the electronics field, to which Monsanto supplies silicon and other semiconductors, has produced a number of interesting instruments for use in testing and measuring. Among their special features are lightness,

GROSS ADDITIONS TO PROPERTY AND DEPRECIATION

	Property Additions	Depreciation, Obsolescence, Amortization and Depletion
	(Millions of Dollars)	
1956	77.1	42.4
1957	64.8	48.2
1958	58.1	52.9
1959	68.7	56.1
1960	121.3	79.0
1961	153.8	86.9
1962	168.8	97.6
1963	114.5	114.6
1964	218.1	120.3
1965	295.2	133.5

Chemstrand and subsidiaries not included in years prior to 1960.

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compactness, high reliability and excellent cost performance.

In the area of man-made fibers, Chemstrand developed a new antistatic acrylic for use in blankets. It provides freedom from static electricity through at least five home launderings.

Because of improvements made in 1965, *Acrilan* acrylic fiber now offers superior heat stability and dyeing properties, the latter making possible carpets of brighter, more lustrous colors.

Intensive research and development effort into the problem of flat-spotting in nylon-reinforced tires led in 1965 to the formulation of a new nylon tire yarn. Initial test quantities have been rated by some automobile makers as suitable for tires on new cars, a market in which nylon has only small participation.

Work on nylon hosiery yarns has resulted in products that give knitters a broader base for a variety of hose with improved styling, fit and textures.

Twisloc nylon yarns have been successfully introduced into raschel fabrics, where their performance is markedly superior in such applications as slips, blouses, dresses and other apparel.

And, for use in textured nylon stretch fabrics, Chemstrand has created yarns that offer such new performance advantages as greater recovery power in stretch garments.

In August, the engineering departments of all operating divisions were consolidated into Monsanto's Central Engineering Department and moved into the new Engineering Center in St. Louis. This move enabled Monsanto to utilize the company's entire engineering resources more efficiently in implementing its large expansion program.

In November, Monsanto received Chemical Engineering magazine's 1965 Kirkpatrick Chemical Engineering Achievement Award. The company was so honored for successfully scaling up to commercial reality its patented electrolytic process for making organic chemicals. The process is being used to convert acrylonitrile into an intermediate for making nylon yarn.

Wholly owned Monsanto Research Corporation in 1965 continued its successful execution of research programs for government agencies. A number of its projects show promise of profitable application in the civilian marketplace as well as in military or space programs.

The research subsidiary's 1965 achievements included successful preliminary testing of its hydrazine-air fuel cells as silent sources of electric power for military use; new progress in devising a low-cost means for making high-strength fibers from such metals as boron, beryllium and special alloys; promising results in use of the plasma torch to apply insoluble, intractable, temperature-resistant coatings; synthesis of new antimalarial drugs; and additional success with its deicers for aircraft runways.

Mound Laboratory, which the research subsidiary operates for the Atomic Energy Commission in Miamisburg, Ohio, continued to conduct important research, development and manufacturing activities. Noteworthy in 1965 were Mound's contributions to the commission's programs for the development of new isotopic sources of heat and power for U.S. space efforts.

PERSONNEL

To accommodate the expanding company's needs for additional manpower, Monsanto hired more technical and professional personnel than in any prior year.

Recruiting activities were supplemented by an enlarged grants-in-aid program. At the same time, Monsanto strengthened its liaison with university faculties through joint meetings to explore areas of mutual interest.

The scope of the company's management-development program was expanded to include Monsanto's worldwide operations. New methods of improving managerial skills received special emphasis.

Courses offered to employes for the first time dealt with such subjects as computer utilization, problem solving and decision making. The sales-training program was enlarged and significantly improved.

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In 1965, new three-year work contracts were negotiated at nine Monsanto locations. A 30-month contract was signed at another plant. There were no major work stoppages during the year.

Despite the occurrence of several fatal accidents, Monsanto's over-all safety record for 1965 was again among the best in the industry.

Monsanto employes worldwide numbered 56,227 at year-end. This represented a year-to-year increase of 8 per cent.

Among the executive personnel changes that occurred during the year were these:

Vice President John R. Eck, who had been general manager of the former Plastics Division, became general manager of the Inorganic Chemicals Division. He succeeded Vice President Edward J. Bock, now a director of the company.

William H. Bromley succeeded Mr. Eck as general manager of what is now the Plastic Products & Resins Division. Prior to that, Mr. Bromley had been president of Shawinigan Resins Corporation, a former Monsanto subsidiary and now a part of the division Mr. Bromley heads.

James D. Mahoney, formerly president of 50 per cent owned Mobay Chemical Company, was appointed general manager of the Organic Chemicals Division. He replaced Robert M. Morris, who resigned from the company.

Messrs. Bromley and Mahoney were elected vice presidents of the company in December.

Earlier, Irving C. Smith was elected a Monsanto vice president and transferred to St. Louis from Brussels, Belgium, where he had served as managing director of Monsanto Europe S.A. He now heads a staff responsible for formalizing and coordinating corporate profit-improvement efforts.

At the time of Mr. Smith's move, Vice President Monte C. Throdahl, general manager of the International Division, moved his headquarters from St. Louis to Brussels and added to his duties those formerly handled by Mr. Smith.

SHAREOWNERS OF RECORD

	1965		1964		1963		1962		1961	
	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	32,084	4,610,890	30,446	4,691,800	27,863	4,354,601	28,545	4,557,252	28,722	4,723,196
Women	29,211	3,872,397	28,328	3,850,905	24,322	3,603,280	24,657	3,640,656	24,565	3,647,262
Joint Accounts	18,431	897,004	17,770	909,442	16,881	876,116	17,375	858,686	17,346	852,952
Charitable Institutions	488	204,768	480	204,432	395	144,691	224	87,445	234	125,849
Educational Institutions	128	197,391	136	190,164	127	151,485	117	178,808	111	154,489
Estates and Trusts	9,770	1,723,319	9,384	1,669,731	8,065	1,395,227	8,446	1,697,284	8,191	1,875,843
Insurance Companies	270	1,322,827	236	1,196,581	211	1,058,065	201	988,887	190	859,916
Brokers and Nominees	1,800	17,853,952	1,685	16,629,555	1,640	13,397,722	1,133	9,856,764	1,120	9,090,762
All Others	1,356	951,809	1,368	1,517,317	1,104	4,982,638	1,754	7,144,365	1,724	6,693,171
Total	93,538	31,634,357	89,833	30,859,927	80,608	29,963,825	82,452	29,010,147	82,203	28,023,440

In 1965, 69 per cent of Monsanto shareowners held fewer than 100 shares.

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MONSANTO'S WORLDWIDE INTERESTS

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

NORTH AMERICA

UNITED STATES: Chemstrand Research Center Inc. (100%) conducts research in the field of textiles.

Fabric Services Inc. (100%) specializes in dyeing and finishing polyester-cotton blends and other fabrics for the textile industry.

Filtered Rosin Products Company (100%) produces gum naval stores and synthetic resins.

Leonard Construction Company (100%) designs and builds chemical plants and other types of plants.

Mobay Chemical Company (50%) is a major producer of urethane chemicals.

Monsanto Export Company (100%) is a trade corporation to handle export sales of Monsanto products in the western hemisphere.

Monsanto International Finance Company (100%) was formed in 1965 to obtain investment funds abroad to help finance overseas expansion.

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

Polythane Corporation (100%) manufactures spandex elastomeric yarns.

Wood Treating Chemicals Co. (100%) produces wood preservatives.

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

Plax Canada Limited (50%) produces plastic blownware.

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

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 chemical fibers exported to areas outside Europe and handles certain investments outside the United States.

VENEZUELA: Monsanto Venezuela Inc. (100%) produces oil.

EUROPE AND MIDDLE EAST

BELGIUM: Monsanto Europe S.A. (100%) provides management supervision of investments and marketing activities in Europe and the Middle East; produces polyvinyl butyral plastic interlayer for laminated safety glass; and will begin producing plasticizers in 1966.

FRANCE: Societe Monsanto (100%) makes plastics raw materials and chemicals

ISRAEL: Israeli Chemical Fibres Limited (60%) manufactures *Acrilan* acrylic fiber.

ITALY: Applicazioni Chimiche Societa Per Azioni (40%) produces acrylic fiber.

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

SPAIN: Aiscondel S.A. (50%) makes consumer products of plastics. Two subsidiaries produce chemicals and plastics raw materials.

UNITED KINGDOM: Chemstrand Limited (100%) manufactures *Acrilan* acrylic fiber and will start making nylon 6,6 yarns in 1966.

Lansil Limited (100%) produces acetate flake and yarn, textile fabrics and apparel.

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

Polythane Fibres Limited (100%) makes spandex yarns. A subsidiary produces rubber yarns.

ASIA AND AUSTRALIA

AUSTRALIA: Australian Petrochemicals Limited (55%) manufactures plastics raw materials.

Monsanto Chemicals (Australia) Limited (80%) makes chemicals and plastics raw materials. A subsidiary produces fluorocarbons.

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

Mitsubishi Vonnel Company Limited (38%) makes acrylic fiber.

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 more than 100 sales agencies representing Monsanto in most parts of the world:

Chemstrand International S.A. — Switzerland
Helen Harper Inc. — United States
Monoil UK, Inc. — United Kingdom
Monsanto Chemicals of India Private Limited — India
Monsanto Chile Comercial e Industrial Limitada — Chile
Monsanto Comercio e Industria Limitada — Brazil
Monsanto (Deutschland) GmbH — West Germany
Monsanto (El Salvador) S.A. — El Salvador
Monsanto Far East Limited — Hong Kong
Monsanto (Guatemala) S.A. — Guatemala
Monsanto International Engineering Company — United Kingdom
Monsanto Japan Limited — Japan
Monsanto Oils Ltd. — Canada
Monsanto Research S.A. — Switzerland
Monsanto (Venezuela) C.A. — Venezuela
Plax A.G. — Switzerland
Sidaplax S.A. — Belgium

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ACCOUNTANTS' OPINION

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

BOATMEN'S BANK BUILDING
SAINT LOUIS 63102

Monsanto Company:

We have examined the statement of consolidated financial position of Monsanto Company and its subsidiary companies as of December 31, 1965 and the related statements of consolidated income and paid-in surplus and retained earnings for the year then ended. 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, the accompanying statement of consolidated financial position and statements of consolidated income and paid-in surplus and retained earnings present fairly the financial position of Monsanto Company and its subsidiaries at December 31, 1965 and the results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

February 7, 1966

Haskins & Sells

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STATEMENT OF CONSOLIDATED FINANCIAL POSITION

ASSETS

	1965	1964
Current Assets:	*(In Thousands)*	
Cash	$ 33,124	$ 27,768
Marketable securities, at cost which approximates market	58,151	52,806
Net receivables	267,296	239,753
Inventories	258,726	214,915
	617,297	535,242
Investments and Miscellaneous Assets, at Cost or Less:		
Investment in and advances to associates	23,893	25,250
Miscellaneous investments and receivables	63,496	60,650
	87,389	85,900
Property, Plant and Equipment, at Cost	1,962,041	1,698,250
Less accumulated depreciation and depletion, etc.	925,328	822,267
Net property	1,036,713	875,983
Deferred Charges	42,710	37,843
	$1,784,109	$1,534,968

The above statement should be read in conjunction with pages 20, 21 and 22 of this report.

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AND SUBSIDIARIES

AT DECEMBER 31, 1965 AND 1964

LIABILITIES

	1965	1964
	(In Thousands)	
Current Liabilities:		
Accounts payable and accruals	$ 197,567	$ 154,770
Income taxes	59,832	75,870
Current portion of long term debt (less $1,000,000 debentures in treasury)	9,806	10,500
	267,205	241,140
Notes, Debentures, etc.—Less Current Portion Above	467,554	345,480
Other Liabilities and Deferred Credits:		
Deferred income taxes	53,853	46,375
Miscellaneous	9,827	3,436
	63,680	49,811
Minority Interests in Subsidiary Companies	28,180	26,858
Shareowners' Equity:		
Common shares—authorized, 35,000,000 shares, par value $2 each; outstanding, 31,634,357 shares in 1965 and 30,859,927 shares in 1964	63,269	61,720
Paid-in surplus	524,033	466,030
Retained earnings	370,188	343,929
	957,490	871,679
	$1,784,109	$1,534,968

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STATEMENT OF CONSOLIDATED INCOME

	1965	1964	Increase Decrease
	(In Thousands)		
Net Sales	$1,468,147	$1,358,678	$109,469
Cost of Goods Sold	1,039,598	940,077	99,521
Gross Profit	428,549	418,601	9,948
Less:			
Selling and administrative expenses	149,418	134,279	15,139
Research; development, patent and engineering expenses	69,969	66,796	3,173
	219,387	201,075	18,312
Operating Profit	209,162	217,526	*8,364*
Income Charges — Net	6,557	3,457	3,100
Income Before Income Taxes	202,605	214,069	*11,464*
Provision for Income Taxes:			
Current	72,160	87,198	*15,038*
Deferred	7,478	11,980	*4,502*
	79,638	99,178	*19,540*
Net Income	$ 122,967	$ 114,891	$ 8,076

The above statement should be read in conjunction with pages 20, 21 and 22 of this report.

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AND SUBSIDIARIES

STATEMENT OF CONSOLIDATED PAID-IN SURPLUS AND RETAINED EARNINGS

	1965	1964
	(In Thousands)	
PAID-IN SURPLUS		
Balance at Beginning of Year	$466,030	$406,243
Additions:		
Excess of approximate market value of common capital stock distributed as a stock dividend over the par value thereof	50,213	48,263
Excess of amounts received over the par value of common capital stock issued under stock option plans	7,790	11,524
Balance at End of Year	$524,033	$466,030
RETAINED EARNINGS		
Balance at Beginning of Year	$343,929	$318,062
Addition — Net Income for the Year	122,967	114,891
	466,896	432,953
Deductions:		
Dividends on capital stock of parent company:		
Cash — $1.45 a share in 1965 and $1.25 a share in 1964	44,809	37,606
Stock — 2%	51,453	49,471
	96,262	87,077
One-half of deficit for period from date of acquisition of initial 50 per cent interest to December 31, 1964 of Blume Knitwear, Inc. and subsidiaries, which became wholly-owned subsidiaries in February 1965	446	
One-half of deficit at December 31, 1963 of Polythane Corporation and subsidiaries, 50 per cent-owned companies, which became wholly-owned subsidiaries in May 1964		1,947
	96,708	89,024
Balance at End of Year	$370,188	$343,929

The above statement should be read in conjunction with pages 20, 21 and 22 of this report.

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FINANCIAL REVIEW

The accompanying financial statements (pages 16 through 19) consolidate all active domestic and foreign subsidiaries in which Monsanto Company directly or indirectly has more than a 50 per cent interest.

The Revenue Act of 1964 provides for a credit against Federal income taxes equal to approximately seven per cent of expenditures for machinery and equipment purchased and placed in service during the year. The reductions in income tax provision resulting from this investment credit were $14,199,000 in 1965 and $6,049,000 in 1964.

The use of the sum of the years digits method for computing depreciation on most of new assets acquired since 1954 was continued in 1965. The excess of depreciation provided by this method over straight line depreciation was $19,189,000 in 1965 and $17,252,000 in 1964. For income tax purposes only, the company in 1962 adopted the guideline lives established for machinery and equipment by the United States Treasury Department. The additional depreciation taken for tax purposes reduces the current income tax liability. Net income for the year, however, is not affected, since an amount equivalent to the reduction in current taxes payable is charged to income to provide for deferred taxes payable in future years.

Charges against income for depreciation, obsolescence and depletion amounted to $133,485,000, of which $129,644,000 was depreciation and obsolescence and $3,841,000 depletion. In 1964, such charges were $116,596,000 and $3,672,000.

Repair and maintenance charges included in operating expenses were $89,956,000 in 1965 and $80,432,000 in 1964.

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 $19,908,000.

In certain prior years, provisions were made for income taxes payable in future years resulting primarily from the excess of depreciation and amortization of facilities constructed under Certificates of Necessity for income tax purposes over depreciation for accounting purposes. For the years 1965 and 1964, $3,590,000 and $1,821,000 of such taxes became payable and were charged against the reserve provided in prior years.

The company's Federal income tax returns have been examined and closed for all years through 1956. Returns for the years 1957 through 1959 have been examined by the Internal Revenue Service, and returns for the years 1960 and 1961 are presently under examination. Differences of opinion exist between the company and the Service on the tax treatment of certain items of income and expense, principally depletion and foreign-source income. The Internal Revenue Service has proposed an assessment for the years 1957 through 1959 of approximately $8 million and the company is contesting the assessment. The ultimate disposition of the items in question is not presently determinable, but it is believed that adequate provision has been made in the accounts for possible deficiencies.

Reserves for doubtful accounts were $5,564,000 in 1965 and $5,446,000 in 1964.

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 1965 and 4.6 in 1964.

To assist in financing the company's large program of capital expenditures, a credit agreement was entered into in February 1965 under which

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the company may borrow up to $100 million from certain banking institutions during a commitment period expiring August 15, 1966. The loans, which carry interest at the rate of 4½ per cent to February 15, 1970, and thereafter to maturity at a 4¾ per cent rate, are repayable in installments beginning May 15, 1970 and ending February 15, 1975. Under the credit agreement, $75 million had been borrowed as of December 31, 1965.

In November 1965, Monsanto International Finance Company, a wholly-owned subsidiary, sold $25 million of 4½ per cent Sinking Fund Debentures Due 1985 to investors outside the United States. The debentures, which are fully guaranteed by Monsanto Company, are convertible into Monsanto Common Stock beginning May 1, 1966 at $93 a share, subject to adjustment under certain conditions.

The long term debt of the company and its subsidiaries, exclusive of current maturities, totaled $467,554,000 at the end of 1965, as shown in the table on page 22.

The company is a defendant in several antitrust actions and in a patent infringement suit. The defense of these cases is generally in early stages of preparation. Company counsel believe that these actions can be successfully defended and that, in any event, the results of such litigation will not have any materially adverse effect on the financial position or operations of Monsanto.

The company was contingently liable as guarantor of bank loans to 50 per cent-owned companies and others aggregating approximately $8,600,000 at December 31, 1965 and $12,300,000 at the end of 1964.

In 1965, cash dividends of 35 cents in each of the first three quarters and 40 cents in the fourth quarter were paid on the common shares. Also, 620,138 common shares were distributed on December 23, 1965 in payment of a two per cent stock dividend.

The equity in the unaudited 1965 net income of 50 per cent-owned companies was $58,000, compared with $1,614,000 in 1964. The decline in equity in 1965 was caused by erosion of selling prices on products of Mobay Chemical Company and by adverse economic conditions in Japan. Dividends of $401,000 were received from these companies in 1965 and $1,112,000 in 1964. The equity in the unaudited net assets of such companies at the end of the year was $26,568,000, which exceeded the carrying value of $23,893,000 by $2,675,000.

The company has four stock option plans in effect: the plans authorized by shareowners in 1951, 1960 and 1964 for key employes, and the Third Employes' Stock Plan, authorized by shareowners in 1964 for hourly and salaried employes except participants in the three plans for key employes. The status of the authorized shares of the three key plans and the changes occurring during the year were:

	1951 Plan	1960 Plan	1964 Plan
Outstanding 1 1 65	39,284	287,995	409,050
Unoptioned 1 1 65	—	2,687	151,950
Optioned during year	—	3,600	19,120
Exercised during year	14,097	91,535	5,779
Terminated during year	—	1,728	9,220
Cancelled during year	—	815	—
Outstanding 12 31 65	25,717*	202,331*	421,354*
Unoptioned 12 31 65	—	—	144,979*

*Adjusted for 1965 two per cent stock dividend.

Under the three key plans, 533 options are outstanding, at prices, after adjustment for stock dividends, ranging from $31.14 to $101.04 a share.

The following tabulation sets forth information for 1965 on common shares relating to the Third Employes' Stock Plan:

Outstanding 1/1 65	286,633
Unoptioned 1 1 65	363,339
Optioned:	
January 25 (21-month options) at $81.50 each	12,439
June 23 (15-month options) at $84.00 each	6,992
December 23 (9-month options) at $79.00 each	
Exercised	42,881
Terminated	35,040
Outstanding 12 31 65	228,143
Unoptioned 12 31 65	378,948

Subsequent to December 31, 1965, but prior to January 24, 1966, the expiration date for the De-

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cember offering, options for an additional 3,108 shares were accepted by employes.

The option prices under the Third Employes' Stock Plan are equal to 95 per cent of the fair market value on the dates the options were offered. Payments by the employe over the option period are made by payroll deductions on which the company credits interest at a rate of five per cent.

At December 31, 1965, there were 1,401,472 shares of common stock reserved for the above plans, and 268,817 shares reserved for conversion of debentures of a subsidiary company.

LONG TERM DEBT
(Exclusive of Current Maturities)

	1965	1964
	(In Thousands)	
Parent company:		
3¼% sinking fund debentures, due 1968	$ 6,250	$ 7,500
4½% - 4¾% promissory notes, due 1970/1975	75,000	—
2.65% debentures, due 1971 (less $1,000,000 in treasury in 1964)	20,000	20,000
3⅜% sinking fund debentures, due 1972	9,000	9,500
3½% promissory notes, due 1972	33,812	41,012
4½% notes, due 1976	3,520	—
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	—
Shawinigan Resins Corporation:		
4½% debentures, due 1976	—	3,720
Monsanto Chemicals Limited (English subsidiary):		
6% debentures, due 1977/1982	7,547	7,769
5% debentures, due 1982	8,815	9,061
Chemstrand Limited (English subsidiary):		
Bank loans (½% over bank rate) due 1969	13,796	—
Monsanto Cie S.A. (Luxembourgian subsidiary):		
4¾% bank loans due 1967/1971	10,020	—
6¼% bank loans due 1968	6,720	—
4¼% bank loan due 1969	3,000	3,000
Monsanto Europe S. A. (Belgian subsidiary):		
6% bank loan due 1967	—	600
6.8% bank loan due 1969/1975	1,554	—
Other subsidiaries	2,520	2,318
Total	$467,554	$345,480

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MONSANTO COMPANY AND SUBSIDIARIES

SOURCE AND DISPOSITION OF FUNDS

(In Thousands)

	TOTAL	1965	1964	1963	1962	1961
Source of Funds:						
Net income	$ 467,872	$122,967	$114,891	$ 82,990	$ 78,368	$ 68,656
Provisions for:						
Depreciation, depletion, etc.	552,874	133,485	120,268	114,606	97,639	86,876
Deferred income taxes	43,282	*7,478*	11,980	12,373	11,451	
Outside financing:						
4½%-4¾% promissory notes	75,000	75,000				
4½% sinking fund debentures	25,000	25,000				
Foreign subsidiaries	37,721	32,776	3,276	1,669		
4¾% promissory notes	99,593				99,593	
Common shares issued under options	47,304	8,099	12,108	14,532	2,639	9,926
Other - net	*6,367*	2,982	1,571	*5,368*	2,366	*7,918*
	1,342,279	407,787	264,094	220,802	292,056	157,540
Disposition of Funds:						
Dividends on common shares	174,179	44,809	37,606	34,978	29,470	27,316
Plant additions and replacements	950,418	295,160	218,105	114,502	168,833	153,818
Investment in affiliated companies	52,316	1,126	13,340	18,443	9,597	9,810
Retirement of debt	75,071	11,396	10,418	13,452	17,877	21,928
Increase in working capital[1]	112,117	44,595	29,845	18,042	14,614	5,021
Increase *decrease* in cash and securities	*21,822*	10,701	*45,220*	21,385	51,665	*60,353*
	$1,342,279	$407,787	$264,094	$220,802	$292,056	$157,540

(1) Exclusive of cash and securities.
Italics indicate deduction.

MONS 352173

TOWOLDMON0014336

MONSANTO COMPANY

HISTORICAL STATEMENT OF

(In millions)

ASSETS

	1965	1964	1963	1962	1961	10 YEARS AGO 1955	25 YEARS AGO 1940
Current Assets:							
Cash	$ 33.1	$ 27.8	$ 40.9	$ 34.4	$ 28.9	$ 45.2	$ 9.4
Marketable securities	58.2	52.8	84.7	67.1	18.6	35.3	
Net receivables	267.3	239.7	198.7	173.9	152.7	65.8	6.1
Inventories	258.7	214.9	191.6	170.6	154.5	92.9	10.3
	617.3	535.2	515.9	446.0	354.7	239.2	25.8
Investments, etc.	87.4	85.9	85.6	84.4	90.5	44.0	1.3
Property:							
Land	27.7	27.4	27.7	25.2	23.4	10.0	2.2
Buildings	289.7	263.0	237.0	219.3	195.0	81.8	10.6
Machinery and equipment	1,529.1	1,295.2	1,148.2	1,054.5	907.0	389.4	37.0
Phosphate deposits	10.0	9.8	9.6	8.6	8.5	5.6	1.0
Producing oil and gas properties	97.9	94.7	89.2	84.8	82.1	60.0	
Undeveloped oil and gas leaseholds	7.6	8.2	9.1	9.6	8.9	10.3	
Accumulated depreciation, etc.	*886.5*	*785.7*	*707.2*	*600.9*	*514.8*	*184.8*	*19.1*
Accumulated depletion	*38.8*	*36.6*	*33.3*	*31.2*	*29.3*	*19.6*	*.1*
Net property	1,036.7	876.0	780.3	769.9	680.8	352.7	31.6
Deferred Charges	42.7	37.9	32.4	24.6	16.3	5.1	.2
	$1,784.1	$1,535.0	$1,414.2	$1,324.9	$1,142.3	$641.0	$58.9

Italics indicate deduction.

MONS 352174

TOWOLDMON0014337

AND SUBSIDIARIES

CONSOLIDATED FINANCIAL POSITION

(In millions)

LIABILITIES

	1965	1964	1963	1962	1961	10 YEARS AGO 1955	25 YEARS AGO 1940
Current Liabilities:							
Accounts payable and accruals.....	$ 197.6	$ 154.8	$ 122.8	$ 127.0	$ 109.3	$ 50.8	$ 6.1
Income taxes.....	59.8	75.8	69.1	42.9	48.8	34.4	3.0
Current portion long term debt.....	9.8	10.5	10.2	9.3	9.2	1.8	
	267.2	241.1	202.1	179.2	167.3	87.0	9.1
Notes, Debentures, etc......	467.5	345.5	352.8	360.8	269.2	164.2	
Other Liabilities:							
Deferred income taxes.....	53.9	46.4	41.4	33.5	28.1	8.3	
Miscellaneous.....	9.8	3.4	2.4	3.5	3.4	5.3	2.9
	63.7	49.8	43.8	37.0	31.5	13.6	2.9
Minority Interests in Subsidiaries....	28.2	26.9	31.3	30.3	23.1	17.8	2.3
Shareowners' Equity:							
Preference shares.....	—	—	—	—	—	—	10.0
Common shares.....	63.3	61.7	59.9	58.0	56.0	42.0	12.4
Paid-in surplus.....	524.0	466.1	406.2	360.9	323.1	149.2	11.4
Retained earnings.....	370.2	343.9	318.1	298.7	272.1	167.2	10.8
	957.5	871.7	784.2	717.6	651.2	358.4	44.6
	$1,784.1	$1,535.0	$1,414.2	$1,324.9	$1,142.3	$641.0	$58.9

MONS 352175

TOWOLDMON0014338

MONSANTO COMPANY

HISTORICAL STATEMENT OF CONSOLIDATED INCOME

(In millions except per share earnings)

	1965	1964	1963	1962	1961	10 YEARS AGO 1955	25 YEARS AGO 1940
Net Sales	$1,468.1	$1,358.7	$1,192.3	$1,063.2	$932.9	$569.5	$51.1
Cost of Goods Sold	1,039.6	940.1	849.7	762.2	672.9	400.4	34.9
Gross Profit	428.5	418.6	342.6	301.0	260.0	169.1	16.2
Less:							
Selling, administrative	149.4	134.3	117.7	100.1	84.7	61.3	4.4
Research, development, patent, engineering	69.9	66.8	58.4	51.6	46.7	17.4	1.4
	219.3	201.1	176.1	151.7	131.4	78.7	5.8
Operating Profit	209.2	217.5	166.5	149.3	128.6	90.4	10.4
Income Charges — Net	6.6	3.4	6.1	8.0	1.5	6.7	(.1)
Income Before Income Taxes	202.6	214.1	160.4	141.3	127.1	83.7	10.5
Provision for Income Taxes	79.6	99.2	77.4	62.9	58.4	39.3	4.7
Net Income	$ 123.0	$ 114.9	$ 83.0	$ 78.4	$ 68.7	$ 44.4	$ 5.8
Per Common Share:							
Adjusted for splits	$ 3.89	$ 3.72	$ 2.77	$ 2.70	$ 2.45	$ 2.09	$ .48
Adjusted for splits and stock dividends	$ 3.89	$ 3.65	$ 2.66	$ 2.55	$ 2.26	$ 1.75	$ .39

MONS 352176

TOWOLDMON0014339

AND SUBSIDIARIES

OTHER DATA

(In millions except where italicized)

	1965	1964	1963	1962	1961	10 YEARS AGO 1955	25 YEARS AGO 1940
Plant additions and replacements....	$295.2	$218.1	$114.5	$168.8	$153.8	$ 49.6	$ 7.5
Depreciation, depletion, etc.....	$133.5	$120.3	$114.6	$ 97.6	$ 86.9	$ 38.3	$ 3.4
Dividends a common share[1].....	*$1.45*	*$1.25*	*$1.20*	*$1.05*	*$1.00*	*$.92*	*$.33*
Book value a common share[1].....	*$30.27*	*$28.25*	*$26.17*	*$24.74*	*$23.24*	*$17.07*	*$3.09*
Common shares[1].....	31.6	30.9	30.0	29.0	28.0	21.0	11.2
Preference shares.....	—	—	—	—	—	—	*100,000*
Working capital.....	$350.1	$294.1	$313.8	$266.8	$187.4	$152.2	$16.7
Long term debt (less current maturities).....	$467.5	$345.5	$352.8	$360.8	$269.2	$164.2	—
Shareowners' equity.....	$957.5	$871.7	$784.2	$717.6	$651.2	358.4	$44.6
Employes[2].....	*56,227*	*52,284*	*48,133*	*45,665*	*38,621*	*23,629*	*7,284*
Shareowners.....	*93,538*	*89,833*	*80,608*	*82,452*	*82,203*	*43,616*	*9,480*

(1) Adjusted for splits.
(2) Includes Monsanto employes in plant operated for U.S. Government (1,678 in 1965).

MONS 352177

TOWOLDMON0014340

DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

EDWARD A. O'NEAL, *Chairman* ..... ST. LOUIS
DILLON ANDERSON ..... HOUSTON
EDWARD J. BOCK ..... ST. LOUIS
DAVID R. CALHOUN ..... ST. LOUIS
JOHN L. CHRISTIAN ..... ST. LOUIS
FREDRICK M. EATON ..... NEW YORK
JOHN L. GILLIS ..... ST. LOUIS
HERBERT HOOVER JR. ..... LOS ANGELES
ROBERT K. MUELLER ..... ST. LOUIS
EDGAR M. QUEENY ..... ST. LOUIS
CHARLES H. SOMMER ..... ST. LOUIS
ALAN H. TEMPLE ..... NEW YORK
CHARLES ALLEN THOMAS ..... ST. LOUIS

EXECUTIVE COMMITTEE

CHARLES H. SOMMER, *Chairman*

EDWARD J. BOCK — JOHN L. GILLIS
JOHN L. CHRISTIAN — ROBERT K. MUELLER
EDWARD A. O'NEAL

FINANCE COMMITTEE

CHARLES ALLEN THOMAS, *Chairman*

DILLON ANDERSON — EDWARD A. O'NEAL
DAVID R. CALHOUN — EDGAR M. QUEENY
FREDRICK M. EATON — CHARLES H. SOMMER
HERBERT HOOVER JR. — ALAN H. TEMPLE

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

LITHO IN U.S.A.

OFFICERS

EDWARD A. O'NEAL ..... *Chairman of the Board*
CHARLES H. SOMMER ..... *President and Chief Executive Officer*
EDWARD J. BOCK ..... *Vice President*
JOHN L. CHRISTIAN ..... *Vice President*
JOHN L. GILLIS ..... *Vice President*
ROBERT K. MUELLER ..... *Vice President*

H. HAROLD BIBLE ..... *Vice President*
WILLIAM H. BROMLEY ..... *Vice President*
JAMES E. CRAWFORD JR. ..... *Vice President*
PATRICK J. DOWD ..... *Vice President*
JOHN R. ECK ..... *Vice President*
ARTHUR W. LUCAS ..... *Vice President*
JAMES D. MAHONEY ..... *Vice President*
EDWIN J. PUTZELL JR. ..... *Vice President*
ROBERT R. RUMER ..... *Vice President*
IRVING C. SMITH ..... *Vice President*
TOM K. SMITH JR. ..... *Vice President*
MONTE C. THRODAHL ..... *Vice President*
J. RUSSELL WILSON ..... *Vice President*

EARL J. WIPFLER ..... *Controller*
EDWIN J. PUTZELL JR. ..... *Secretary*
PATRICK J. DOWD ..... *Treasurer*

LLOYD R. COLE ..... *Assistant Controller*
JACK W. MUELLER ..... *Assistant Controller*
FRANCIS A. STROBLE ..... *Assistant Controller*
WALTER C. THILKING ..... *Assistant Controller*
CHARLES E. CASPARI JR. ..... *Assistant Secretary*
JOHN N. EHLERS ..... *Assistant Secretary*
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*

Regional Vice Presidents

ROY L. BRANDENBURGER — FRANKLIN J. CORNWELL
MARSHALL E. YOUNG

Feb. 21, 1966

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MONS 352179

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