

PLAINTIFF'S EXHIBIT

MON-435

Monsanto

**1974
Annual
Report**
Monsanto
Company

MAR 1100.01

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Operational Highlights

(Dollars in millions, except per share)

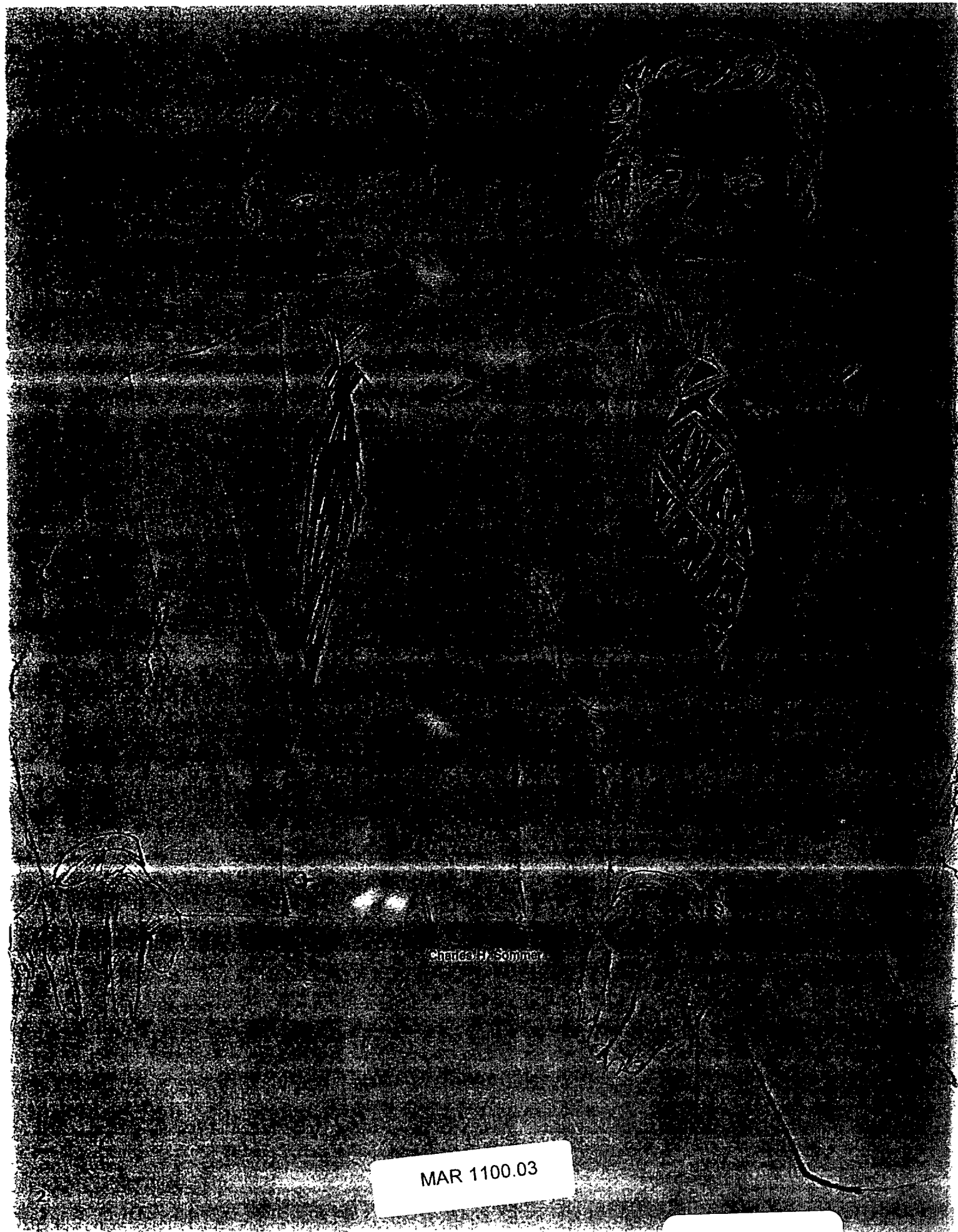
	1974	1973
Net Sales	\$3,497.9	\$2,647.7
Net Income	\$ 323.2	\$ 238.3
Per Common Share:		
Primary Earnings	\$ 9.25	\$ 6.90
Fully Diluted Earnings	8.73	6.54
Dividends	2.30	1.90
Book Value	51.39	44.26
Depreciation, Obsolescence and Depletion	\$ 171.9	\$ 170.3
Plant Additions and Replacements	\$ 313.4	\$ 205.3
Research and Development	\$ 105.3	\$ 82.0
Year End:		
Shareowners — Common Shares	98,542	98,964
Employees	60,926	58,277

Operating Results by Lines of Business

	1974		1973	
	Net Sales	Income	Net Sales	Income
Lines of Business:				
Agricultural Products	\$ 410.7	\$202.3	\$ 283.4	\$121.5
Commercial Products	497.8	4.8	399.0	(0.6)
Industrial Chemicals	947.1	171.5	666.5	103.9
Polymers & Petrochemicals	854.6	136.4	593.5	74.4
Textiles	787.7	35.2	705.3	107.0
Sales and Operating Income	<u>\$3,497.9</u>	<u>550.2</u>	<u>\$2,647.7</u>	<u>406.2</u>
Income Charges (Credits) — Net		(24.1)		(4.9)
Income Before Income Taxes		<u>574.3</u>		<u>411.1</u>
Provision for Income Taxes		<u>251.1</u>		<u>172.8</u>
Net Income		<u>\$323.2</u>		<u>\$238.3</u>

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Charles H. Sommer

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To Our Shareowners

The year 1974 was one of economic extremes. Initially, it presented conditions that strained our ability to meet customer demands and later in the year we found conditions that challenged our skills in sustaining a strong, forward thrust in the many worldwide markets we serve. It was a year in which Monsanto's products, technological and human resources provided the base for record sales, net income and earnings per share.

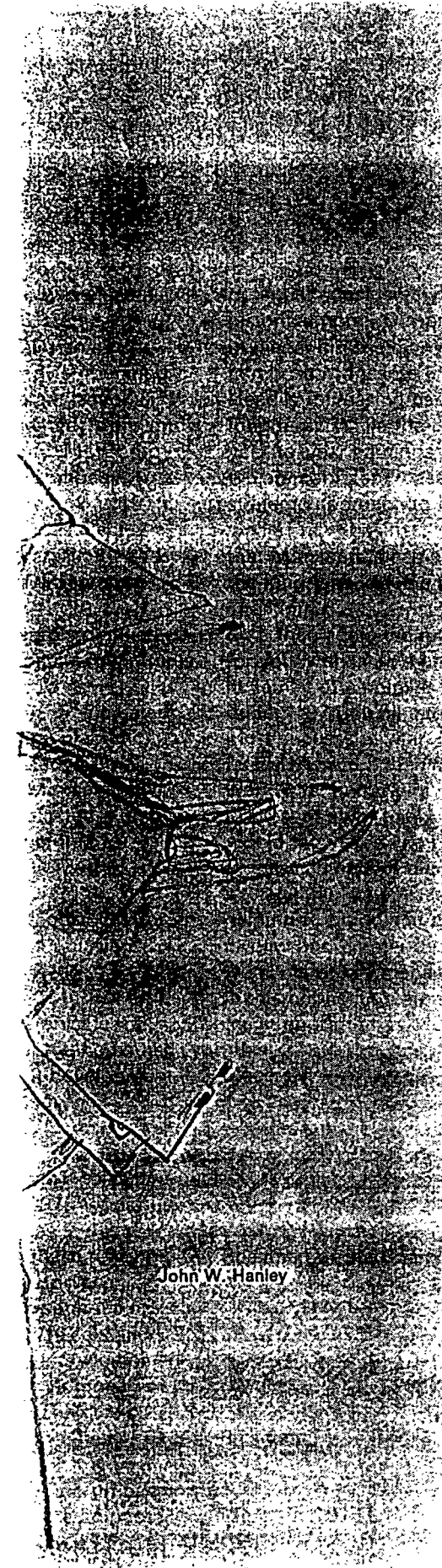
For 1974, consolidated net sales reached \$3.498 billion, a 32 per cent increase over the \$2.648 billion reported in 1973.

Net income for 1974 increased 36 per cent over the \$238.3 million reported for 1973, reaching \$323.2 million. Primary earnings per common share for 1974 were \$9.25 while fully diluted earnings per common share were \$8.73. In 1973, primary earnings were \$6.90 per share and fully diluted earnings were \$6.54.

Effective Jan. 1, 1974, the company changed its method of accounting for inventories to the last-in, first-out (LIFO) method. This was done because the rapid increases in prices during the year would result in an over-statement of profits if the first-in, first-out (FIFO) method were continued, since inventories sold were replaced at substantially higher prices. The effect of this change was to reduce 1974 net income by \$77.5 million or \$2.26 per common share.

1974 Earnings Factors

As we entered 1974, most Monsanto plants were operating near peak capacities. Shortages of some petroleum-based feedstocks impacted some manufacturing operations however, and, in certain instances, we were forced to allocate products to our customers. Virtually all areas of the



John W. Hanley

Charles H. Sommer
Chairman of the Board

John W. Hanley
President & Chief Executive Officer

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company were reporting large increases in sales and all lines of business were recording significant improvements in operating income.

As rigorous price control restraints that spanned nearly two years were removed early in 1974, Monsanto was able to offset the raw material costs it had been absorbing by selective increases in its selling prices.

Undoubtedly we will see some softening of selling prices in the current economic climate. However, as the economy improves, we anticipate that capacity limitations, together with historical growth rates within the chemical industry, will result in price stability, which, in turn, will provide future earnings strength.

During 1974, each of Monsanto's operating companies recorded sales increases over those of 1973, and four of the five operating units recorded substantial increases in operating income.

Agricultural Chemical Sales Up

A number of product areas exhibited particular market strength throughout 1974. Agricultural chemicals increased sales by 44.9 per cent over those of 1973 as the world demand for greater food production continued unabated.

Another strong showing was reported by the rubber and specialty chemicals products in which Monsanto is a world leader; demand remained high for these products for virtually all of 1974. Similarly, the phosphates and detergents product groups turned in fine performances in 1974.

These, and the vast majority of Monsanto's other business groups, showed rapid growth in 1974; however, the year was not without its problems or its challenges.

Energy Shortages

The petroleum-based raw material shortages which caused some disruptions in production early in the year, were held to a minimum through innovative approaches to securing feedstocks and primary raw materials needed for production. As the year progressed and demand normalized, we were able to secure ample feedstocks for our manufacturing operations. However, the prices of feedstocks and a number of raw materials vital for production doubled, tripled and even quadrupled, primarily reflecting higher petroleum costs.

The first harbinger that all was not right with the world's economies appeared in the spring as sales of our electronic group slowed. Shortly after midyear, demand for man-made fibers slackened in Europe and this phenomenon reached U. S. markets within weeks.

Sales for other Monsanto products also slowed in the fourth quarter, reflecting a deepening recession in all world markets. Demand for plastics used in automotive and home building industries declined, as did sales of plasticizers and process chemicals.

The current economic climate does not diminish our strong belief that in the next decade Monsanto will be in a strong growth mode. Monsanto is continuing to position itself to be a world leader in science-based products. To insure our participation in a growing economy, we have initiated an ambitious capital spending program that will see major new capacity coming on-stream late in 1975, in 1976, in 1977 and beyond in areas of defined strength.

Capital Spending Increases

Last year our capital spending was the highest in the company's history,

reaching \$313.4 million. This year we anticipate capital spending to increase more than 60 per cent and, depending on the availability and delivery of materials, to reach between \$500 and \$550 million. A similar level of expenditures is already planned for 1976.

These major capital commitments are part of Monsanto's long-term program to plan and manage its capital investments on a consistent, year-to-year basis. We intend to minimize the broad fluctuations in capital spending, thereby helping to maximize long-term profit growth. This long-term planning also accrues to the company's benefit by implementing engineering and construction efficiencies that are the keys to future expansion programs.

High rates of inflation, particularly in construction costs, render the benefits we receive from depreciation inadequate to fill our capital requirements. As an example, construction of a new acrylonitrile plant today is two to three times more expensive than one built 10 years ago. Even though our planned capital expenditures will be financed primarily through depreciation and retained earnings, we will be required to raise additional funds in the public capital markets. While the timing is uncertain, we plan to raise such funds in the debt market and see no present need to seek additional equity.

Executive Changes

Significant changes were effected during the year. On Dec. 6, 1974, Mr. Buck Mickel, chairman of the board of Daniel International Corporation, Greenville, S. C., a leading engineering

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and construction firm, was elected, effective Jan. 1, 1975, to the Monsanto Board of Directors.

Within the company's operating groups a number of organizational changes were implemented. Monsanto's fifth operating company, Monsanto Agricultural Products Company, became operational on Jan. 1, 1975. Mr. Edmond S. Bauer was elected a Monsanto group vice president and named head of the new operating company.

Reflecting Monsanto's planned, aggressive level of capital expenditures, Facilities and Planning, a new corporate staff function, was created to closely coordinate the planning, engineering and manufacturing functions throughout Monsanto. Mr. Francis E. Reese was elected a group vice president and appointed to manage this new function.

Mr. James E. Crawford Jr., vice president, assumed responsibility for the International Division on Jan. 1, 1975, succeeding Mr. Reese.

On June 14, 1974, Mr. Robert L. Berra was elected vice president-personnel, in charge of the combined personnel-management development programs of the company.

1975 Outlook

Projecting Monsanto's sales and earnings potential for 1975 would be difficult in ordinary times and is virtually impossible in these times of economic uncertainty. However, underlying strengths in such major areas as agricultural chemicals and phosphates and detergents, combined with continuing growth potential in areas such as specialty chemicals, provide a strong base on which 1975's results will be built.

Monsanto, with this strong base, has established a level of earnings

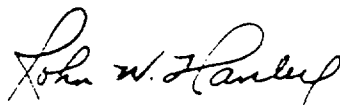
potential considerably higher than its historical norm. Our primary objective in managing the many businesses that comprise Monsanto is to provide steadily increasing earnings over the long term. While the possibility of a year-to-year earnings decline exists, we are confident, based on our strategic approach to both existing as well as new business opportunities, that Monsanto's earnings will, over the long term, have a positive upward direction.

Once again we must underscore for you Monsanto's greatest resource, its family of employees. Their efforts during 1974 culminated in Monsanto's most successful year. Monsanto's family has more than 60,000 employees worldwide and it would be impossible to present all of them to you. We would, however, like to present some of the members of our key management organization who are helping to guide and direct Monsanto to new and greater destinies. Those members of key management appearing in this publication are representative of the strength that is Monsanto.

Sincerely,



Chairman of the Board



President

March 7, 1975

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Richard J. Mahoney

D. R. Fischer

Edmond S. Bauer

Nicholas L. Reding

Monsanto Agricultural Products Company

(Dollars in millions)

	Sales	Operating Income
1974.....	\$410.7	\$202.3
1973.....	283.4	121.5
1972.....	222.3	80.9
1971.....	199.7	68.0

Monsanto's newest operating company, the Monsanto Agricultural Products Company, established record sales and operating income levels in 1974. It also initiated an ambitious expansion program as it continues its vital role in helping to increase the world's food supply.

The major factors influencing 1974's successful performance included heavy plantings of wheat, corn and soybean crops resulting in greater use of the company's herbicides and fertilizer products. Demand exceeded supply in many areas.

Herbicides produced by this operating company help to control weed growth, making nutrients and moisture more available to crops, thereby increasing yields.

Lasso Herbicide Sales Up

In 1974, sales of *Lasso* herbicide were up sharply among corn, soybean, and peanut growers. Used primarily to control annual, grassy-type weeds, *Lasso* is finding additional market penetration as it is used in combination with other agricultural chemicals to control broader spectrums of weeds. Too, additional market penetration is being achieved as *Lasso* is broadcast (spread over the entire field) rather than in band use, where it is applied only to rows of corn or soybeans.

During 1974, additional production capacity for *Lasso* came on-stream. Another expansion is under way and will increase production of this versatile herbicide by 50 per cent to meet

Edmond S. Bauer
Group Vice President

D. R. Fischer
Director, Animal & Plant Products

Richard J. Mahoney
Director — International

Nicholas L. Reding
Director, Herbicides

continuing heavy demand. This expansion is expected to be on-stream during 1976.

Sales of *Avadex* herbicides registered further gains in 1974, with substantial increases in Canada and Europe. The family of *Avadex* herbicides has broad use worldwide for the control of wild oats in crops such as sugar beets, wheat, barley, green peas, lentils and flax. With worldwide demand for this product increasing, capacity expansions are under way. A new manufacturing unit is expected to be operational in the United States in 1976 and an expansion of capacity for European *Avadex* markets is under way in Belgium.

***Machete* Expansion**

In the Far East rice-growing areas, sales of *Machete* herbicide reached all-time highs. The herbicide controls grassy weeds in rice, the world's largest food crop. To shorten supply lines and improve service to this fast-growing market, construction of a plant for the manufacture of *Machete* began in late 1974 in the Republic of Korea, in partnership with local interests.

Sales of insecticides rose in 1974, as cotton farmers increased the number of acres planted. Late in 1974, however, world demand for cotton began to soften, affecting parathion insecticide sales in Latin America.

***Roundup* In Commercial Use**

Newer products, for a variety of weed problems that escape existing herbicide technology, are the key to the future in the agricultural area. Monsanto's new *Roundup* herbicide — the first to demonstrate real and

reliable control of perennial weeds — will be a major product for the future.

Roundup appears to control more than 100 species of weeds including such difficult perennials as Johnson Grass and Quackgrass.

During the year, *Roundup* moved into U.S. commercial use for industrial applications such as the control of difficult-to-kill weeds along highway, railroad, fuel and power transmission rights-of-way. In addition to industrial and other nonagricultural uses, *Roundup* is expected to have extensive worldwide application in crop and plantation agriculture. For such applications, test-marketing of *Roundup* began in Malaysia on rubber plantations, and in the United Kingdom, for small grain crops. In the United States, extensive experimental field work required for Environmental Protection Agency registration of cropland uses is continuing according to schedule. Approval for such commodities as wheat, corn and soybeans is expected, but not before 1976.

In late 1974, a new plant for the production of *Roundup* was under construction in Luling, La., with completion scheduled for mid-1976.

***Polaris* Increases Yields**

Polaris, another new product, is the company's first plant growth regulator and is continuing to find wide acceptance in major sugar producing areas of the world. *Polaris* gives sugarcane growers a longer harvest period and increases the yield per acre of raw sucrose which is refined into sugar. Use of *Polaris* improves yields by 10 to 15 per cent.

In 1974, demand for ammonia exceeded supplies. Plans to construct a new 400,000-ton-a-year ammonia plant in Luling, La., were announced late in the year. Start-up is scheduled

for the last quarter of 1976. The new facility will support increased ammonia needs for use in production of other Monsanto products, for fertilizer and for blasting agents.

Animal Products Sales Gain

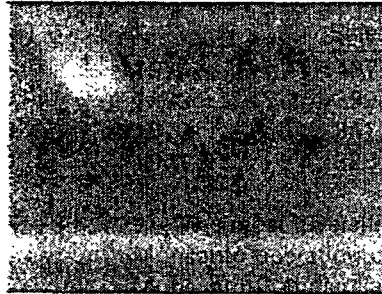
Animal products posted a modest year-to-year sales gain on the strength of a good performance in the first half of the year. In the last half of 1974, sales of feed supplements and antioxidants were affected by cutbacks in feed additive inventories, as customers reduced their production levels. At Farmers Hybrid, Inc., sales of the wholly-owned subsidiary's swine business fell off in the latter part of 1974, as growers, reacting to higher corn and lower hog prices, began to reduce their breeding herds. At year-end, the subsidiary had four "boar power" sales centers in operation in key market areas.

Demand for farm products continues to grow and, following a subnormal harvest in 1974, an increase in planted acreage appears certain for 1975. High crop prices should encourage farmers to push for higher yields through greater use of herbicides.

1974 Highlights

(Dollars in millions)

	<u>Sales</u>	<u>Per Cent of Total</u>
Herbicides, Insecticides and Other Products	\$410.7	100



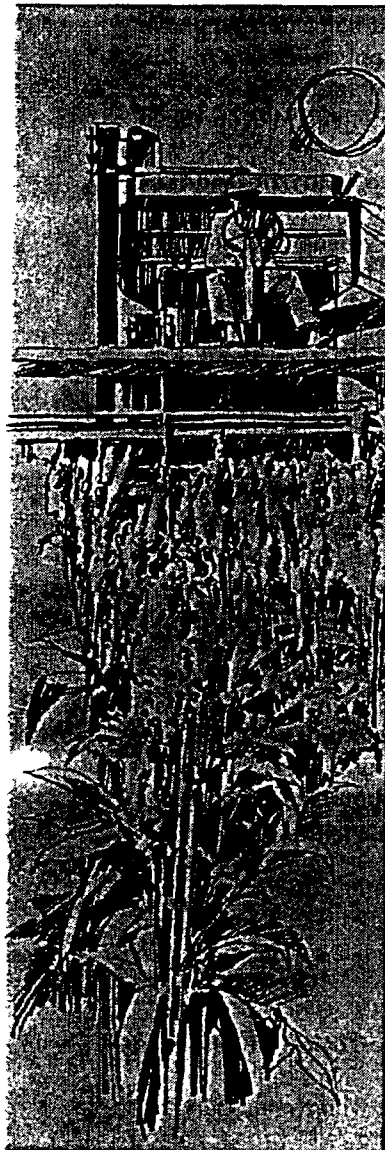
Agricultural Products

Heavy demand for agricultural herbicides led to strong 1974 increases in sales and operating income. Increased plantings of major crops of wheat, soybeans and corn, created increased use of herbicides and fertilizer products.

Sales of *Lasso* herbicide were up sharply as use in concert with other agricultural chemicals broadened market penetration. Additional *Lasso* capacity came on stream and a further expansion will increase production by 50 per cent in 1976.

Avadex herbicides for control of wild oats in wheat, barley and other crops, registered additional gains in Canada and Europe. *Machete* sales growing for rice-producing areas.

Roundup herbicide moved into U.S. commercial use for industrial applications.



F. Eugene Troy

Thomas M. Shive

George M. MacLeod



F. P. LaBelle

Tom K. Smith Jr.

Monsanto Commercial Products Company

(Dollars in millions)

	Sales	Operating Income
1974.....	\$497.8	\$ 4.8
1973.....	399.0	(0.6)
1972.....	341.1	(11.0)
1971.....	328.8	(6.3)

The most diversified of all Monsanto operating companies, Monsanto Commercial Products Company encompasses a number of distinct, established businesses as well as several young, emerging businesses — some of which carry heavy development costs.

Fisher Controls Posts Strong Year

The 1974 surge in capital spending, particularly in energy related industries, contributed to Fisher Controls Company's best year. This wholly-owned Monsanto subsidiary's sales of automatic control valves and digital and analog process controls increased 30 per cent over the previous year as a result of increased volume and improved selling prices.

A new industrial electronics instrumentation plant, scheduled for completion in late 1975, will triple production capacity for ac^2 and dc^2 control systems. Demand for these controls continues to grow due to industrial modernizations, greater use of automation and preference for electronic versus pneumatic controls.

Projected strength for the energy as well as the chemical process industries, both major markets for Fisher products, together with substantial order backlogs, indicate a continued strong sales performance for Fisher in 1975.

Increase In Pollution Control Sales

Monsanto Enviro-Chem Systems, Inc., another wholly-owned subsidiary, posted record sales of *Brink* mist

Tom K. Smith Jr.
Group Vice President

Edward H. Finsilver
Director, Extruded Products Business Group

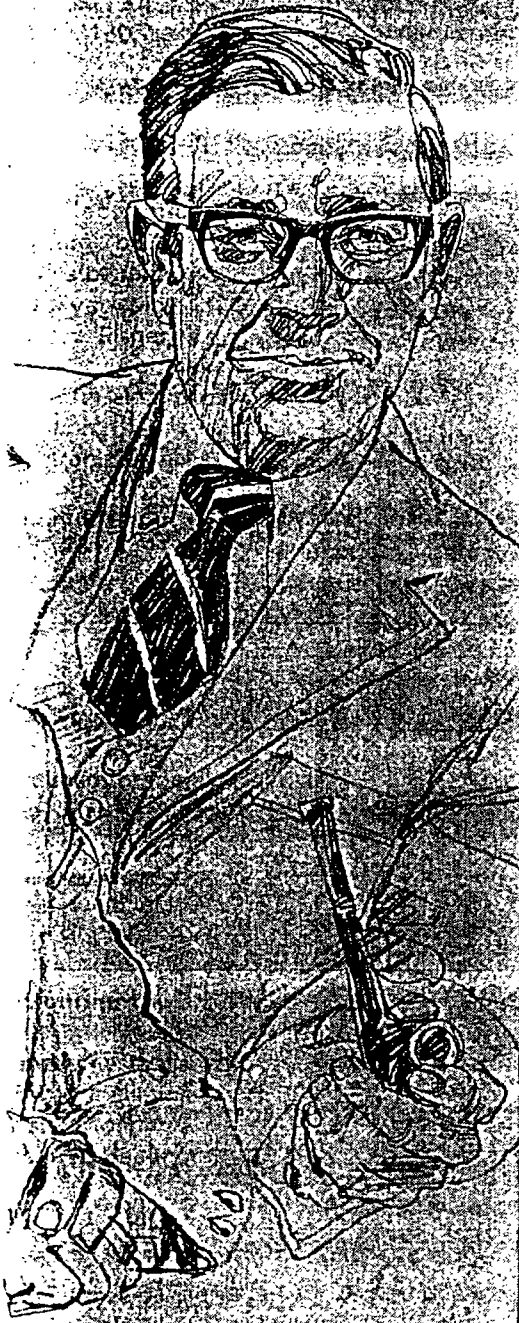
F. P. LaBelle
Director, Enviro-Chem Business Group

George M. MacLeod
General Manager, Electronics Division

Thomas M. Shive
President & Chairman of the Board,
Fisher Controls Company, Inc.

F. Eugene Troy
Director, Consumer Products &
Recreational Surfaces Business Group

Robert L. Walter
Director, Container Business Group



Edward H. Finsilver

eliminators for air-pollution control, sulfuric acid plant design and construction, and vanadium catalyst for contracted sulfuric acid plants. Sales of *Brink* units were bolstered by increased environmental concern in the textiles, food processing and paper industries, which resulted in new markets for the product. Catalyst sales were also at record levels.

Sales backlogs for *Brink* units, catalysts and sulfuric acid plants are at record highs for 1975. To meet catalyst demand, a plant expansion at Avon, Calif., nearly doubled production when completed early in 1975.

Construction of a 1,000-ton-a-day *Landgard* solid-waste disposal and resource recovery system in Baltimore was completed in 1974. Full start-up of the system is scheduled by mid-1975. *Landgard* is a forerunner in new approaches to solve municipal waste disposal problems while recovering useful by-products.

Fome-Cor Sales Off

The container and extruded products business groups showed strong profit increases during 1974. However, there was a fourth-quarter decline in demand for blownware products, film and packaging materials, as well as a steep drop in sales of *Fome-Cor* sheathing board, a product used in the mobile home market. Increased sales performances were achieved in coated fabrics and foam cushioning products in Canada, and in polystyrene meat trays, film and sheet in Belgium.

In the United States, polystyrene shortages prompted closing of one *Polyflex* film and sheet operation, resulting in a significant decline in sales of clear meat trays. There was strong demand for polyethylene film

for both construction and agricultural uses, with prices firm.

Performance of the *Fome-Cor* group was weakened by several factors: shortages existed for coated paper for graphic arts boards; tight mortgage money restricted financing of mobile homes made with sheathing board; and consumers lacked interest in buying automobiles, many of which use *Fome-Cor* automotive board and other products. A new application for *Fome-Cor* as underlayment in refinishing home exteriors was developed.

Cycle-Safe Production Starts

In 1974, Monsanto changed the trademark for its *Lopac* polymeric container to *Cycle-Safe* to emphasize the product's recyclability. The company will conduct active recycling programs as an integral part of the marketing and manufacturing process.

The first *Cycle-Safe* container production is under way at South Windsor, Conn., building toward support of initial market introduction by The Coca-Cola Company during the first half of 1975 in an eastern city.

Plans are also moving ahead for production at units near Chicago and Baltimore. The long-term potential is high for Monsanto's leadership position with a recyclable and safer soft drink container. However, start-up costs and continued development resulted in heavy expense in 1974 and will require even greater expenditures for the company in 1975.

Electronics Sales Drop

After posting gains very early in 1974, electronics industry sales dropped dramatically, reflecting high customer inventories and reduced end-product demand. As a result, the Electronics Division's sales for 1974 were below 1973's record level.

The division encompasses Monsanto's silicon, III-V materials and optoelectronic components businesses, with manufacturing operations in the United States, Malaysia, Indonesia and Belgium.

The latter part of 1974 showed a continuing downward trend in sales of silicon, while shipments of III-V materials remained flat. Sales of optoelectronic devices, such as the numerics on hand-held calculators, also dropped precipitously. The depressed state of the electronics business is expected to continue well into 1975 as large industrial customers work off inventory.

AstroTurf Sales Expand

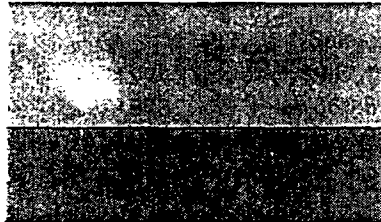
The consumer and recreational surfaces product group had record sales during 1974 in the United States and Western Europe. However, in the fourth quarter, reduced consumer spending caused both the doormat and consumer nylon product groups to fall behind sales levels for the same period a year earlier. Raw material price increases in these areas were a major factor in limiting second-half profit performance. New products in this area are planned for market testing and introduction in 1975.

AstroTurf stadium surface, either contracted for or installed in 1974, ranged from Moscow and Tokyo to Brooklyn and El Paso. Record sales were recorded for the polyurethane poured-in-place fieldhouse and track surfaces. The total market for recreational surfaces is expected to continue expanding in 1975, particularly in soccer fields abroad and in the replacement and new sales markets in the United States.

1974 Highlights

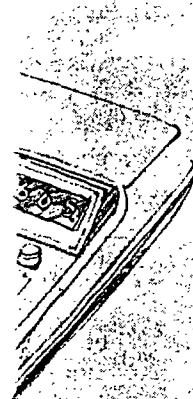
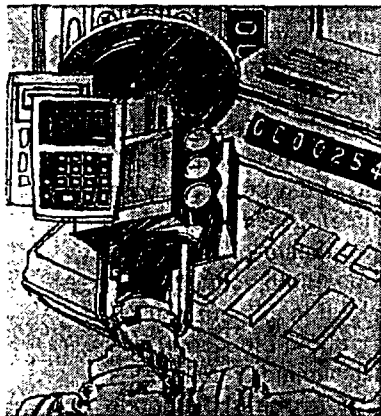
(Dollars in millions)

	Sales	Per Cent of Total
Process Controls and Electronics	\$212.4	43
Plastic Products	160.7	32
Chemical and Environ- mental Systems	85.2	17
Other Products	39.5	8



Process Controls & Electronics

Capital spending surge by energy-related industries benefits sales of process control valves by wholly-owned subsidiary, Fisher Controls. Sales backlog at record level entering 1975. Demand for electronic products, including silicon, III-V materials and optoelectronic devices, slowed early in 1974 and is not expected to rebound until later in 1975.



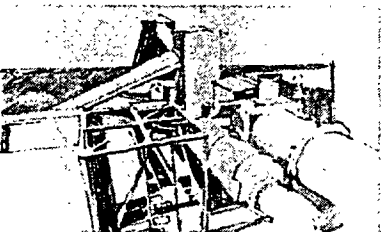
Plastic Products

Modest gains in plastic products areas including blownware and packaging materials. *Cycle-Safe* containers being produced for initial market introduction by The Coca-Cola Company.



Chemical and Environmental Systems

Strong performance in established product lines for *Brink* mist eliminators and vanadium catalysts. *Landgard* system in start up mode in Baltimore.



Other Products

AstroTurf stadium surface installations set record sales levels.

S. Allen Heininger

John Mason

Francis J. Fitzgerald

James E. Springgate

Arne Obel

Monsanto Industrial Chemicals Company

(Dollars in millions)

	Sales	Operating Income
1974.....	\$947.1	\$171.5
1973.....	666.5	103.9
1972.....	572.3	57.7
1971.....	544.3	49.5

The year 1974 saw Monsanto Industrial Chemicals Company set new records in sales and operating income. A worldwide supply/demand imbalance existed during most of the year, with many products in sold-out positions, and a number of products were placed on allocation.

This diversified operating company serves a broad range of markets and a large number of its products are somewhat insulated from the cyclical eccentricities of the economy. These include functional fluids, detergent and phosphate products, food ingredients and fine chemicals. Despite the economic turndown in the fourth quarter, demand for these products remained high.

Late in the year, demand for products serving housing, textiles, automotive and durable goods industries, such as plasticizers and rubber chemicals, softened significantly. This condition is expected to continue for the first half of 1975.

Raw material costs accelerated rapidly through most of the year. However, capacity limitations and strong demand made possible increased selling prices to recover higher costs.

Rubber Chemicals Sales Grow

Rubber chemicals, produced in eight countries, recorded worldwide sales exceeding 1973 levels. Sales of rubber testing equipment also surpassed 1973 results. Product shortages occurred in the early months, because of lack of raw materials, with the operating unit unable to satisfy cus-

H. Harold Bible

H. Harold Bible
Group Vice President

Francis J. Fitzgerald
General Manager, Specialty &
Process Chemicals

Dr. S. Allen Heininger
General Manager, Plasticizers

John Mason
Director — Europe

Arne Obel
General Manager, Rubber
Chemicals

James E. Springgate
General Manager, Detergents &
Phosphates

tomers demand. In the last quarter supply and demand were restored to balance, influenced by the general downturn in automotive production both in the United States and Europe.

The downturn in auto production was offset somewhat by continued demand for replacement tires and tires for heavy construction equipment. The company announced plans for construction of a major rubber chemicals manufacturing unit at a plant site in the United Kingdom. Construction began on a major plant in Brazil, expected on-stream in 1976.

Specialty Chemicals Demand Strong

In the specialty chemicals area, outstanding growth was recorded for both the food chemicals and fine chemicals product lines. Plans were announced for construction of Monsanto's first sorbic acid plant in the United States, with completion set for late 1976. Sales of L-dopa, used in the treatment of Parkinson's disease, reached a record as a new facility completed its first full year of production.

A new United Kingdom plant expansion was planned to serve the European market with *Dequest* water treating chemicals. In Luling, La., an expansion was completed for production of *ACL* swimming pool chemicals.

Santotrac tractive lubricant, a development product, found new uses in industrial drives in the United States and Europe. It is also being

evaluated in industry and government studies, as automotive design engineers look to traction transmissions to improve fuel economy.

Monsanto Flavor/Essence showed sales growth, stimulated by two product breakthroughs; commercialization of the first successful synthetic chocolate flavor and development of an entire line of spray-dried fragrances and flavors.

Process Chemicals Show Gain

Demand for process chemicals, which are used by manufacturers as basic building blocks, was strong for most of 1974. A number of incremental increases partially offset the supply/demand imbalance, but feedstock shortages limited over-all plant production rates.

Monsanto is a leader in both the technology and production of plasticizers which are used to provide flexibility and other properties to certain plastic products.

Plasticizer plant operations were at near maximum output until the fourth quarter of the year. Plasticizers include phthalates, phosphates and specialty additives for a number of consumer products such as vinyl upholstery, wire and cable, wall coverings, flooring and food wraps. The company participates in all world markets for these chemicals.

A major consumer of plasticizers is the vinyl industry, which will be confronted with restrictions on worker exposure to vinyl chloride monomer in the near future. Although the regulations may temporarily affect the production of PVC, it is expected to remain a major product meeting industry needs.

A new plant to produce *Santicizer* 711 plasticizer for the Australian vinyl market became operational during the

year. Future plans call for substantial capacity increases in major plasticizer products to meet anticipated demand in the late 1970's.

Phosphate Sales Increase

Phosphates and detergents reached record sales levels and demand continued high throughout the year. All plants operated at high levels during the year, producing dental, food and detergent grade phosphates as well as phosphorous intermediates.

Research efforts to develop new detergent builders and surfactants accelerated. A new nonphosphate detergent builder is being evaluated by customers and will go into research pilot plant production in 1975.

Efforts to expand the company's phosphates and detergents businesses into other world markets progressed with announcement of a phosphate production complex in Brazil. In the United Kingdom, a plant to produce *TCC* bacteriostat, used in bar soaps, began operations early in 1975. In Augusta, Ga., a new dental phosphates plant was started up early in 1975, and additional phosphoric acid capacity is being installed.

Demand, sales levels and profitability patterns set in 1974 for the detergents and phosphates businesses are expected to continue throughout 1975, thus assuring continued high utilization of the division's phosphate plants.

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1974 Highlights

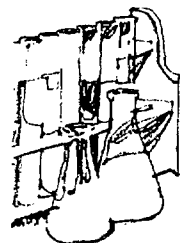
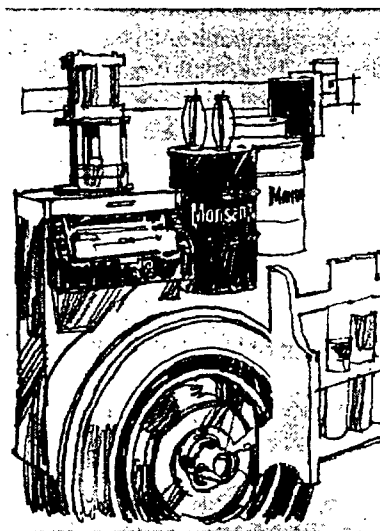
(Dollars in millions)

	Sales	Per Cent of Total
Rubber and Specialty Chemicals.....	\$407.6	43
Process Chemicals and Plasticizers....	292.7	31
Phosphates and Detergents.....	246.8	26

Rubber & Specialty Chemicals

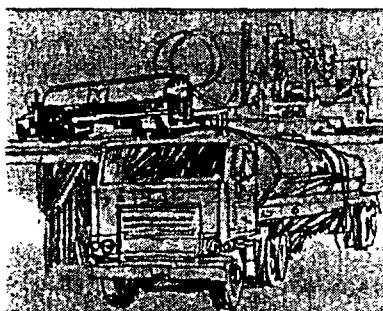
Rubber chemicals and testing equipment produced strong 1974 sales despite slowdown in automotive production. Replacement, truck and off-the-road tire markets continued strong until year end. Expansions underway at United Kingdom plant site and major new plant being constructed in Brazil.

Specialty chemicals sales remained strong throughout 1974. Expansion completed for ACL swimming pool chemicals in U.S. Dequest water treating chemical plant expansion planned in Europe.



Process Chemicals and Plasticizers

Demand strong for most of 1974 but decline noticeable in last quarter. Sales of plasticizers lower in fourth quarter as end market sales slow.



Phosphates and Detergents

Sales remained strong throughout the year as demand exceeded supply for non-detergent uses in food additives, dentifrices and phosphorous intermediates.





William H. Bromley

H. Norbert Dahlstrom

Alfred W. Andrews

J. Virgil Waggoner

Monsanto Polymers & Petrochemicals Company

(Dollars in millions)

	Sales	Operating Income
1974.....	\$854.6	\$136.4
1973.....	593.5	74.4
1972.....	556.8	46.5
1971.....	531.4	30.3

Monsanto Polymers & Petrochemicals Company set new records in 1974, with sales increases in all major businesses. Strong demand for petrochemicals, plastics and resin products was spurred by constricted raw material supplies through the third quarter. The worldwide energy demand provided ready markets for all of the company's oil and gas production.

The cost-price squeeze eased after the first quarter, permitting prices to rise to more realistic levels and benefitting all product areas. In the last quarter, there was an abrupt dropoff in worldwide sales of plastics and resin products. However, the impact was cushioned by the earlier record performance.

Late-1974 Inventory Adjustment

The suddenness of the late-1974 decline, a worldwide phenomenon, signaled a reduction in inventories in downstream industries. This inventory adjustment is continuing into 1975 in most Polymers & Petrochemicals' product areas.

As inventories in the pipeline downstream are corrected, which is expected during the first half, demand for petrochemicals, plastics and resin products should rise. Demand for oil and gas production, which is mostly in the United States and Canada, continues unabated.

Petrochemicals Sales Increase

The petrochemicals business reached record sales levels in all

John R. Eck
Group Vice President

Alfred W. Andrews
General Manager, Plastics

William H. Bromley
General Manager, Resin Products

H. Norbert Dahlstrom
Director — Europe

J. Virgil Waggoner
General Manager, Petrochemicals

product groups. An overheated economy, the dominant factor through most of the year, brought unprecedented demand for styrene monomer, acrylonitrile, acetic acid, phenol, methanol and ethylene and ethylene coproducts.

The exceptional operating records turned in by the two big Texas petrochemicals complexes, at Texas City and Alvin, highlighted the year's manufacturing performance. Downtime was at a minimum, opening the way for high-volume production of monomers, the critical building block raw materials for many other Monsanto product groups. The Alvin, Tex., plant supplies a considerable portion of the company's primary petrochemical needs including ethylene, propylene and benzene.

The combination of economic factors associated with rapid inflation and weakening demand affected the petrochemical business as the recession deepened in late 1974. Product demand slowed as petrochemical derivatives reflected depressed conditions in the automotive, housing, plastics and synthetic fiber markets.

Plastics Demands Grow

Polymers & Petrochemicals' plastics business also was up in all sales categories, as demand outpaced supply during most of 1974. The sharp decline in the last quarter, brought on principally by depressed automotive and housing markets, was more than offset by excellent sales performance in the first three quarters.

Styrene polymers led sales increases in the plastics business. To meet

long-term objectives and to capitalize on the expected upturn late in 1975, new facilities for the production of *Lustrex* polystyrene were brought on-stream in 1974 in Addyston, Ohio, and Decatur, Ala. Polystyrene and expandable polystyrene capacity additions are being constructed in France, and a similar expanded facility in Australia completed its first full year of operation in 1974.

ABS Expansion Under Way

Monsanto is also committed to long-term growth in its other styrenics, *Lustran* ABS (acrylonitrile-butadiene-styrene) and *Lustran* SAN (styrene-acrylonitrile). ABS expansions, under way in the United States and Canada, will be completed in 1975.

Vydyne nylon resins gained wider acceptance, establishing a base for greater potential sales for these versatile engineering thermoplastics in the automotive and industrial fields.

The resin products business had record sales, with worldwide operations sold out through the first three quarters. *Gelvitol* polyvinyl alcohol and *Gelva* multipolymer solutions were in strongest demand in the vinyl-acetate based product line. *Resimene* aminoplast coating resins and phenolic thermal insulation binder volume grew impressively.

Resin Products Sales Soften

Resin products sales slackened in the fourth quarter. Return to normal growth rate will largely follow the recovery of the durable goods and construction industries, though specialty segments of the business are less sensitive to general economic trends.

New resin plants were completed in Trenton, Mich., and Antwerp,

Belgium, to supply the specialty, adhesives and coatings markets. Plans for construction of a plant to manufacture *Butvar* polyvinyl butyral (PVB) resin at Springfield, Mass., were announced for start-up in 1976. Markets for PVB, in addition to laminated safety glass, include adhesives and coatings.

Sales of *Saflex* polyvinyl butyral sheet, the interlayer for laminated safety glass used in automotive windshields and other applications, were lower than in 1973 because of the depressed condition in the worldwide automotive market. However, increased sales for architectural purposes softened the impact of the dropoff in automotive demand on total *Saflex* PVB sheet performance for 1974.

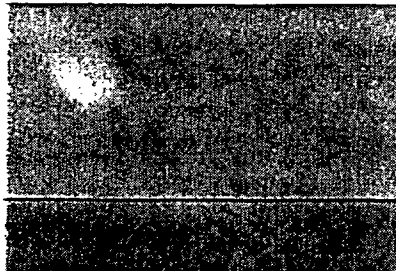
Oil and gas sales, another Polymers & Petrochemicals' business, were up, and exploration continued in the Java Sea, U. K. North Sea, Canada and onshore and offshore United States.

In 1975, exploration activities will be continued worldwide. In offshore Indonesia, a drilling and production platform will be installed to develop a 1974 oil discovery under a production-sharing contract in which Monsanto has a one-sixth interest. The discovery well flowed at a rate in excess of 3,800 barrels a day.

1974 Highlights

(Dollars in millions)

	<u>Sales</u>	<u>Per Cent of Total</u>
Plastic Materials	\$578.9	<u>68</u>
Petrochemicals	224.9	<u>26</u>
Oil & Gas Production and Exploration	50.8	6



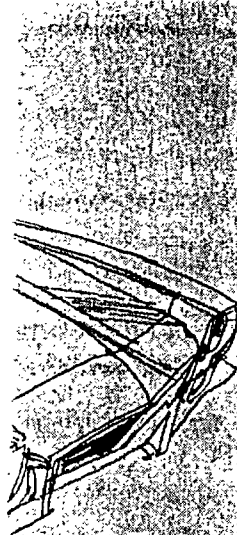
Plastic Materials

Sales growth for ABS plastic. Expansions underway in the United States and Canada.

Continued wider acceptance of nylon resins. New applications in automotive and industrial field.

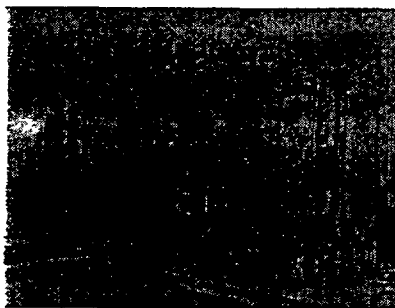
Sales increased in polystyrene. Expansions completed during 1974 in the United States and underway in France.

Resin products business had record sales. New plants completed in the United States and Belgium, a further expansion announced in the United States. Sales of *Saflex* polyvinyl butyral glass interlayer were lower, reflecting depressed automotive market.



Petrochemicals

Volume of petrochemical sales at record levels in all product groups. Exceptional operating records by petrochemical plants in Texas. Construction underway on acrylonitrile plant in United States; similar expansion announced for England. Most of the year saw unprecedented demand for all products.



Petroleum

Exploration continued in various parts of the world.





Paul W. Runge

Leonard A. Cohn

Robert E. Burke

H. James Lawler

John M. Chamberlin

Eric Sharp

Cole Downing

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Monsanto Textiles Company

(Dollars in millions)

	Sales	Operating Income
1974.....	\$787.7	\$ 35.2
1973.....	705.3	107.0
1972.....	532.9	42.3
1971.....	482.9	36.4

Record sales were registered by Monsanto Textiles Company in 1974, but a dramatic downturn in demand in the second half saw total operating income drop significantly below the 1973 level.

The year began with demand exceeding supply and with production below capacity. The oil embargo had reduced raw materials availability, creating shortages and causing costs to soar.

Recession Impacts Fiber Demand

The market situation changed dramatically early in the third quarter. A worldwide slowdown in consumer spending triggered a change of policy by fabric manufacturers and retailers, from inventory accumulation to inventory reduction. This reversal was felt throughout the textiles industry, resulting in a sharp reduction in fabric, yarn and fiber demand. Weak consumer demand is expected to continue at least through the first half of 1975 before resuming an upward climb.

As raw materials and energy prices soared in 1974, the Textiles Company took measures to pass through cost increases and restored reasonable profit levels. However, soft market demand in the last half of the year prevented some cost increases from being passed on, thus affecting income. Another factor affecting 1974 synthetic fiber performance was the nearly simultaneous downturn of the European and U.S. economies.

Each of the major market groups within Monsanto Textiles Company

Dr. Louis Fernandez
Group Vice President

Robert E. Burke
General Manager, Commercial

John M. Chamberlin
General Manager, Technology

Leonard A. Cohn
General Manager, Commercial

Cole Downing
Director — Europe,
Managing Director, Monsanto Ltd.

H. James Lawler
General Manager, Planning &
International Development

Paul W. Runge
General Manager, Manufacturing
Operations

Eric Sharp
Chairman, Monsanto Ltd.



was affected by these external conditions. Nevertheless, noteworthy sales gains were registered by the industrial fibers, home furnishings, hosiery and Textiles - Europe business groups.

While increased selling prices aided Textiles - Europe in lifting dollar sales volume over that of 1973, raw materials and energy costs rose even more. A slow second half was experienced in Europe, as consumer resistance curbed production in the entire apparel market and reduced carpet shipments.

Carpet Shipments Lower

The falloff in housing starts, which plunged from the 1973 high, coupled with consumer unwillingness to buy, reduced U.S. industry carpet shipments 9 per cent from the year earlier. This affected the carpet business group's sales and, at year's end, inventory reductions were still occurring at all levels from mill to retail.

The apparel group felt the impact of inventory shrinkage late in the year as consumer resistance to higher prices stiffened and purchases of products, other than necessities, were deferred.

The industrial fibers end-use market was also influenced by economic conditions late in 1974, as many nylon tire yarn customers closed their plants over the year-end holiday period to adjust to lower demand.

Home Furnishings Show Gain

Home furnishings and hosiery business groups showed year-to-year sales gains, although the market served by the hosiery group did not share in early 1974 boom conditions enjoyed by other segments of the textiles industry. The hosiery gains

were made in what was essentially a buyer's market all year long.

Home furnishings sales gains were achieved in the first three quarters of 1974. This business group also experienced difficulties in the fourth quarter, as consumer resistance, inventories and mill shutdowns mounted.

Late-1975 Gain Anticipated

Monsanto Textiles Company's sales are closely linked to consumer demand and the economy in general. These are expected to begin recovery in the latter half of 1975, and the operating company's performance is expected to parallel this trend. With the restoration of consumer confidence, momentum is expected to pick up. The textiles industry should go into 1976 with demand reaching, if not exceeding, levels realized at the start of 1974. Longer-range, the future for synthetic fibers is even brighter with consumption expected to double in the next decade.

Nylon intermediates facilities are planned for Teesside, England, to improve the company's raw materials position. Use of the Monsanto-developed electrohydrodimerization (EHD) process will reduce production costs for adiponitrile, a key intermediate chemical to be made at Teesside. The EHD process also reduces dependency on cyclohexane, a raw material in short supply during the petrochemical shortage and expected to be so again in the future. A similar program is under way in the United States to improve production at existing EHD facilities at Decatur, Ala.

Other capital expenditure decisions in 1974 are designed to improve Monsanto's European textiles position and the U.S. markets for filament polyester and acrylic. *Acrilan*

acrylic capacity will be increased at Coleraine, Northern Ireland, from 105 to 130 million pounds per year, and nylon carpet yarn capacity will be increased in Europe.

Plant Expansions Scheduled

Acrilan acrylic and *SEF* modacrylic fiber capacity will be increased by 70 million pounds at the Decatur plant. Demand for modacrylics, because of the U.S. government's adoption of a number of flame retardance standards, is expected to grow significantly.

Plans to double filament textile polyester yarn capacity at Sand Mountain, Ala., are well under way. Existing filament polyester production was a strong contributor to 1974 performance; with its "partially oriented yarns," Monsanto is building a sound position in this product area.

Several acquisitions were made in 1974 to broaden services and product range in the textiles field. The acquisition of Olympia Industries makes it possible for Monsanto, for the first time, to supply dyed, textured polyester to fabric manufacturers. Acquisitions were also made in England and Germany of texturizers to improve Monsanto's apparel nylon market position while moving closer to the consumer.

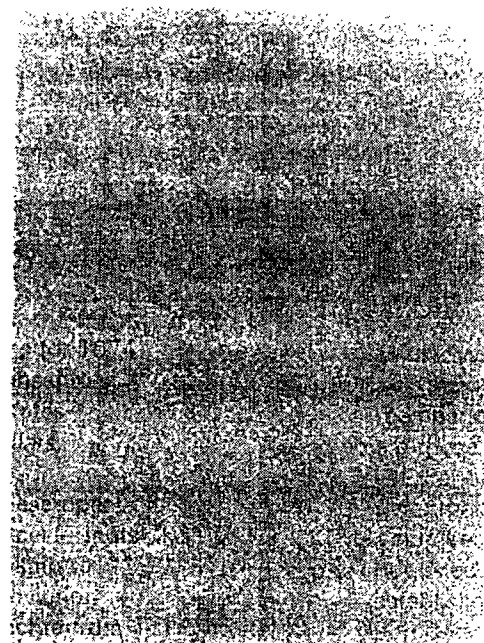
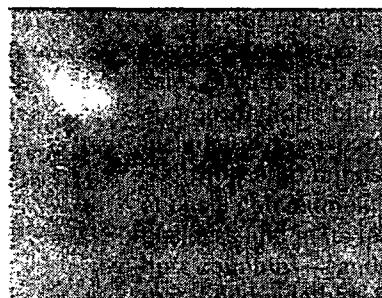
The future for its *Cerex* nylon spunbonded products and for other products under development, is considered bright.

Monsanto now has excellent positions in acrylics and nylon and is rapidly building a firm position in filament polyester in the United States. A stronger position has been established in Europe, giving the company a good base in the largest market in the world outside of the U.S.

1974 Highlights

(Dollars in millions)

	Sales	Per Cent of Total
Man-Made Fibers	\$787.7	100



Man-Made Fibers

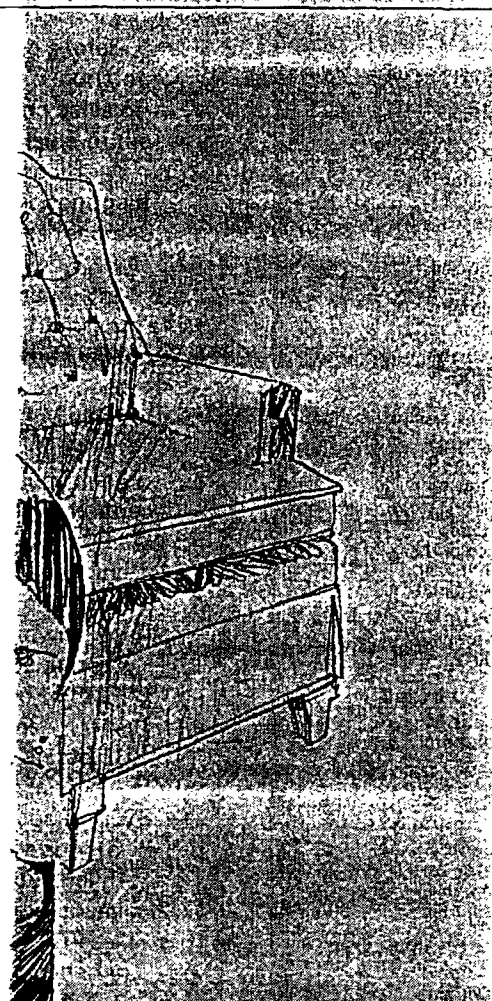
Record sales registered. Operating income off significantly as costs soar, demand drops dramatically. Noteworthy sales gains made by four business groups: industrial fibers, home furnishings, hosiery and Textiles — Europe.

Textiles gearing up for expected upturn in economy later in 1975.

Nylon intermediates facilities announced for Teesside, England, to improve raw materials position, reduce production costs, lessen dependency on cyclohexane. Similar program in U.S. will improve production at existing facilities at Decatur.

Other capital expenditures will improve position in Europe and U.S. for filament polyester and acrylic markets. *Acrilan* capacity at Coleraine, Northern Ireland, to be raised from 105 to 130 million pounds while *Acrilan* acrylic and *SEF* modacrylic capacity to be upped 70 million pounds at Decatur.

Plans to double Sand Mountain filament polyester yarn capacity well under way with existing production a strong contributor to 1974 performance.



Athol D. Lapthorne

Paul A. Klingsporn

Allen G. Erdman

Onnik S. Tuygil

James E. Crawford Jr.

International Division

International operations for 1974 reached new levels, as Monsanto's sales outside the United States approached one billion dollars, including U.S. exports.

Monsanto brings to these operations a commitment to excel — in its business and in its relationship to host countries — and a conviction that worldwide benefits accrue from world trade.

For the year, Monsanto's international sales, made up of exports of U.S.-produced products and sales of products manufactured outside of the United States, reached a record \$999.7 million — a 30.9 per cent gain over the \$763.8 million sales recorded in 1973.

The International Division is responsible for coordinating Monsanto's business interests outside the United States in conjunction with the operating companies. The division also represents the corporation in its relationships with certain subsidiaries and affiliates not currently within the province of the operating units.

Monsanto's operating companies generally have worldwide responsibility for product lines, and worldwide sales and the attendant operating income have been included in the operating company sections.

Export sales from the United States increased to \$296.2 million, compared with \$230.6 million in 1973. Sales increases were led by growth in phosphate and other industrial chemicals, as well as by petrochemicals and products for agriculture. These U.S. export sales are not included in other area sales reported below.

In Europe, sales reached \$480.0 million in 1974, an increase of 31.9 per cent over 1973 sales of \$363.8. Growth was led by strong first-half sales increases in rubber chemicals,

James E. Crawford Jr.
Vice President

Dr. John R. Durland
Area Director — Japan

Allen G. Erdman
President & Chief Executive Officer,
Monsanto Canada, Ltd.

Paul A. Klingsporn
Area Director — Latin America

Athol D. Lapthorne
Area Director — Australia &
Southeast Asia

Onnik S. Tuygil
Chairman of the Board,
Monsanto Europe S.A.

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plasticizers, acrylonitrile, styrene plastics, man-made fibers and agricultural chemicals.

In Canada and Latin America, sales were \$144.9 million, an increase of 37.6 per cent over 1973 sales of \$105.3 million. Sales were led by plastics and plasticizers, phosphates, agricultural chemicals, coated fabrics and textiles.

In Latin America, sales continued strong well into the fourth quarter and then, volume dropped. Limited availability of feedstocks hampered earlier growth.

In Asia-Pacific and other world areas, sales reached \$78.6 million in 1974, compared with \$64.1 million in 1973.

In Australia, higher raw materials

cost and increased wages adversely affected performance, although sales increased somewhat. Resin products, styrene polymers and phenol were major contributors to the increase. Start-up of a new plasticizer plant was completed at the company's West Footscray site near Melbourne.

The company's Spanish affiliate, Aiscondel S.A., a major plastics producer and fabricator, reported increased sales. The company's performance was impaired by higher costs and wages and by restricted availability of raw materials.

In Mexico, Industrias Resistol S.A. recorded higher sales. The Monsanto affiliate entered a joint

venture during the year to produce phenol in Mexico.

Mitsubishi Monsanto Chemical Company, a Monsanto affiliate in Japan, experienced strong sales growth in the Asia-Pacific area, led by rubber chemicals sales. Expansions were planned in plastics and plastic film, and a new site was purchased at Hazaki.

In the Republic of Korea, Monsanto Overseas S.A. entered into a joint venture with Korea Agricultural Chemicals Company for the production of *Machete* herbicide. The plant is expected to begin operation in 1975.

Sales to Eastern Europe countries and the U.S.S.R. were expanded.

Worldwide Interests

Included among Monsanto's member companies around the world are those appearing in the following list. Per cent ownerships are noted parenthetically. In addition, there are a number of other member companies not listed, many of which have been established for marketing or investment purposes.

NORTH AMERICA

United States

Farmers Hybrid Companies, Inc. (100%) produces hybrid breeding swine.

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

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

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

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

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

United Systems Corporation (100%) manufactures electronic test and measurement instruments.

Canada

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

EUROPE AND MIDDLE EAST

Belgium

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

France

Societe Monsanto (100%) manufactures plastics.

Israel

Israel Chemical Fibres Ltd. (60%) manufactures acrylic fiber.

Luxembourg

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

Spain

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

Switzerland

Monsanto Research S.A. (100%) performs basic research.

United Kingdom

Monsanto Limited (100%) manufactures and markets chemicals, plastics, acrylic fiber and nylon 6,6 yarns.

West Germany

Monsanto (Deutschland) GmbH (100%) manufactures acrylic fiber and markets Monsanto products.

LATIN AMERICA

Argentina

Monsanto Argentina S.A.I.C. (100%) manufactures plastics and chemicals.

Brazil

Goyana S.A. Industrias Brasileiras de Materias Plasticas (44%) manufactures and markets plastic products.

Colombia

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

Mexico

Industrias Resistol S.A. (39%) produces chemicals and plastics.

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

Netherlands Antilles

Monsanto International N.V. (100%) obtains funds abroad to assist in financing the operations of Monsanto Company and its subsidiaries.

Panama

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

ASIA AND AUSTRALIA

Australia

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

Hong Kong

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

Japan

Mitsubishi Monsanto Chemical Company (49%) manufactures and markets chemicals and plastics.

Howard K. Nason

Byron L. Williams

John B. Clark

George Roush Jr., M.D.

C.E. Anagnostopoulos

Monte C. Throdahl

Under its commitment to technology, Monsanto continuously works to upgrade its existing products and processes while exploring new areas of possible growth. During 1974, the company substantially increased expenditures for research and development as an investment toward the future.

Out of its technology have grown business areas now in various stages of development. A decade ago, for example, the company's agricultural products business struggled through the heavy development costs involved in bringing it to its present potential.

As the agricultural business began to take its place as a profit contributor, plastics technology that was to lead to the *Cycle-Safe* container program was emerging from the laboratories. That program, described in the Monsanto Commercial Products Company segment of this report, is presently in its own expensive start-up phase of development. It is another indication of the belief that long-term potential justifies the sacrifice of near-term profit.

As these businesses grow, other potential opportunities are explored by basic research conducted and supported by Monsanto.

Recently Monsanto entered into an accord with Harvard University, under which the company will equip a research laboratory at Harvard Medical School and finance its basic research in molecular biology, the behavior of large natural or man-made molecules which trigger biological activity.

The programs will be selected and directed by Harvard authorities, and Monsanto is to cooperate where it can contribute expertise from its own chemical, process engineering and other strengths. Monsanto has agreed

to spend up to \$23 million between now and 1986 and will work to commercialize discoveries made in the course of the research.

The Harvard arrangement was welcomed by Monsanto, which possesses no medical research capability of its own. Personnel of the Monsanto Medical Department are well qualified in occupational health and environmental medicine but confine their efforts to those areas.

Monsanto last year was awarded 294 U.S. patents, one index to the success of its innovative explorations. Monsanto Research Corporation, the subsidiary which performs contract research, primarily for branches of the U.S. government, had a record year.

A new agricultural product, *Roundup* herbicide, requires higher expenditures in 1975, as the massive data necessary to qualify it for use on croplands in the United States is gathered and filed with regulatory authorities. The promise of opening an entire new area of weed control has been judged worth the expense.

Monsanto customers in many industries are testing new developments in their plants. Reinforcement of rubber for use in conveyor and transmission belts through incorporation of oriented short cellulosic fibers is one innovation. Use of an *Acrilan* acrylic carpet fiber which can be dyed three different colors in a single dye bath is another.

Monsanto's intermediate- and long-term future is based on the employment of technology resources to satisfy societal needs. These technology assets of the company will be carefully managed, efficiently nurtured and precisely developed in coming years for the benefit of customers, shareholders, employees and the general public.

Monte C. Throdahl
Group Vice President

C. E. Anagnostopoulos
General Manager, New Enterprise
Division

John B. Clark
Director, Corporate Patent
Department

Howard K. Nason
President, Monsanto Research
Corporation

George Roush Jr., M.D.
Director, Corporate Medical
Department

Byron L. Williams
Director, Corporate Research
Department

Robert L. Bera

James E. McKee

Ernest S. Robson Jr.

H. A. Ericson

C. Preston Cunningham

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Operations

Energy and Feedstocks

Changes in the world's energy supply and economics affected virtually every element of Monsanto. The company's benzene-related manufacturing plants operated below capacity early in 1974.

The Chocolate Bayou, Tex., petrochemicals plant was kept at capacity during the Mideast oil embargo with alternate sources of feedstock. Natural gas feedstocks for other U.S. plants were supplied under long-term contracts.

Purchased petrochemicals, which augment Monsanto's own manufacturing, were in short supply during the first half of 1974.

The cost of feedstocks and purchased petrochemicals escalated to \$400 million, compared to \$180 million in 1973, as materials were obtained from new sources to keep Monsanto's plants operating. At year-end, prices began to soften slightly from the peak reached in the first half.

Fuel oil used in plant boilers experienced similar fluctuations. In the United States, plants burning natural gas obtained fuel oil supplies as a back-up. Although the U.S. coal strike threatened electricity suppliers, Monsanto plants which use coal had sufficient stockpiles. The cost of fuels and purchased energy and other utilities rose to \$195 million, versus \$130 million in 1973. Energy costs will continue to rise in the future, particularly in the U.S. as the value of coal and gas, on a BTU basis, catches up with oil prices.

Partially offsetting higher fuel costs was the company's expanded energy conservation program. The effort, first given major emphasis in 1973 in the U.S., was extended to Canadian and European locations.

By improving day-to-day operations and making incremental investments in existing units, the company's 1974 energy consumption rate was cut eight per cent — saving \$18.7 million in purchased energy.

The impact on Monsanto from additional U.S. energy taxes, proposed early in 1975, will depend upon final legislation. We are actively stressing that taxes on the use of oil or gas as feedstocks would be inflationary and an undue hardship on the chemical industry which has no alternative to petroleum.

Personnel

Monsanto management is convinced that its people are primarily interested in an opportunity to achieve. Its personnel programs are, therefore, directed toward providing managers and supervisors with the skills necessary to develop a climate of achievement. These include orientation toward results and the tying of rewards to accomplishment. The company believes that such programs can be effective only if they are an integral part of the operation and not peripheral to it. Therefore, responsibility for implementation rests with the respective operating companies and staff departments.

Monsanto's human resources represent a significant reservoir of talent. Encouraging employees to reach for their full potential and optimizing their utilization is a prime objective of the personnel policies. This includes all employees — management, minority, female, technical, field sales and plant personnel.

This approach reflects Monsanto's management style which stresses standards of excellence. The emphasis is on accomplishment and its accompanying pride and productivity.

C. Preston Cunningham
Group Vice President

Robert L. Berra
Vice President — Personnel

H. A. Ericson
Director, Corporate Advertising & Promotion Department

James E. McKee Jr.
Director, Corporate Public Relations Department

Ernest S. Robson Jr.
Vice President,
Energy & Materials Management

James H. Senger

John W. Dapp

James E. H. H. H.

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Facilities & Planning

High levels of capital expenditures projected for the rest of this decade and the growth of our worldwide manufacturing capability have led to the creation of a new corporate staff function, Facilities and Planning.

The new group is charged with responsibility for long-range corporate planning, engineering design and facility construction, and coordination of manufacturing activities throughout Monsanto.

The corporate planning process establishes strategic business directions with the various operating companies and business units consistent with corporate objectives. Management decisions on deployment of our resources of people, capital, and technology are made in accord with these strategic plans. This effort will permit better planning of cash management, allow new product capacity to be moved into the market more systematically, and optimize use of our engineering capabilities.

Beginning in 1973, Monsanto embarked on the largest capital investment program in its history, with expenditures for new plants and equipment reaching \$313 million in 1974. Plans for major expenditures in 1975 and 1976 totaling over \$1 billion are being implemented.

At the current time, the monthly rate of capital spending exceeds that of 1974 and is expected to accelerate as 1975 progresses. Agricultural chemical operations for both present high volume products and emerging new products are being expanded. By the end of 1975, the company will have doubled its polystyrene capacity to 800 million pounds and, concurrently, large expenditures are being made for new acrylonitrile production used in the manufacture of

Cycle-Safe containers and in nylon and acrylic fibers.

In other areas of continuing strength for Monsanto, a number of expansion programs are under way. These programs will provide products to end use markets — further augmenting our position in areas such as rubber chemicals, detergent materials, and specialty resins for adhesives and coatings.

The breadth of the company's capital projects during 1974 were the largest in terms of dollar volume in Monsanto history. Design and engineering of new facilities during the year ranged from the world's largest acrylonitrile plant on the Gulf Coast of the United States to a new herbicide plant in Korea.

Significant international effort included engineering and construction programs in Europe, India, Brazil, Malaysia and other parts of the world. In total, 55 active project sites were involved, including 32 U.S. sites.

With this record activity came new challenges. The rapid escalation of plant costs associated with chemical processing in 1974 ranged from 22 per cent a year in the United States to more than 40 per cent in Brazil. In addition, there was a worldwide scarcity of many critical construction materials.

Rising energy costs necessitated new concepts in design for energy conservation. Concurrently, new safety regulations and governmental constraints on plant emissions grew tighter.

Beyond plant start-up, the new corporate staff group has begun coordination among manufacturing resources of the various operating companies of Monsanto.

Francis E. Reese
Group Vice President

John M. Depp
Director, Corporate Engineering
Department

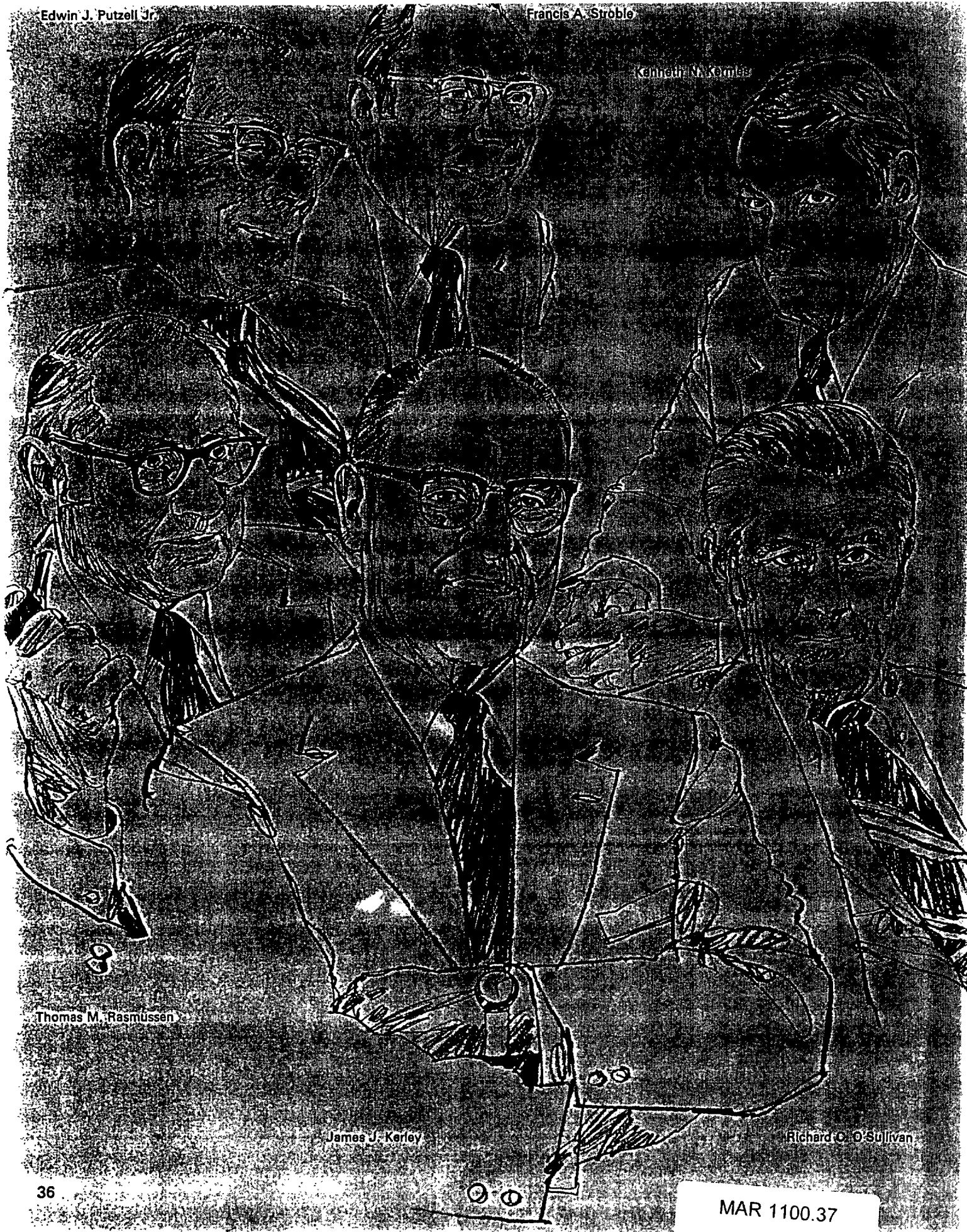
James H. Senger
Director, Corporate Plans &
Development

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Edwin J. Putzell Jr.

Francis A. Strohle

Clarence M. Conley



Thomas M. Rasmussen

James J. Kerley

Richard O. O'Sullivan

James J. Kerley
Group Vice President

Kenneth N. Kermes
Treasurer

Richard C. O'Sullivan
Controller

Edwin J. Putzell Jr.
Vice President, Secretary
& General Counsel

Thomas M. Rasmussen
Director, Corporate Tax Department

Francis A. Stroble
Director, Management Information
& Systems Department

Financial Review

(Dollars in charts and tables in millions, except per share)

Operating Results

Record sales and earnings were established in 1974. For the year, sales were \$3,498 million — exceeding 1973 sales of \$2,648 million by \$850 million or 32 per cent. Net income rose \$84.9 million or 36 per cent from the 1973 level of \$238.3 million to \$323.2 million — the highest in Monsanto's history. Primary earnings per common share reached \$9.25 as compared with \$6.90 in 1973. Worldwide demand for the Company's broad line of products was relatively strong throughout the year. However, demand for electronic products began to soften in the second quarter, closely followed by textile fibers in the third quarter. In the last sixty days of the year, this softness spread to plastic materials and rubber chemicals. While Monsanto experienced the two-fold effects of inflation and recession which characterized the worldwide industrial economy, all of its five operating companies set new sales records and four of the companies established record operating income levels.

In order not to overstate reported profits as a result of inflation during the year, the Company changed its method of accounting for substantially all United States inventories from first-in, first-out (FIFO) to last-in, first-out (LIFO). This was necessary because of the rapid increase in prices in 1974 which caused inventories sold to be replaced by similar goods at substantially higher costs. The effect of the change was to decrease reported earnings by \$77.5 million or \$2.26 per share.

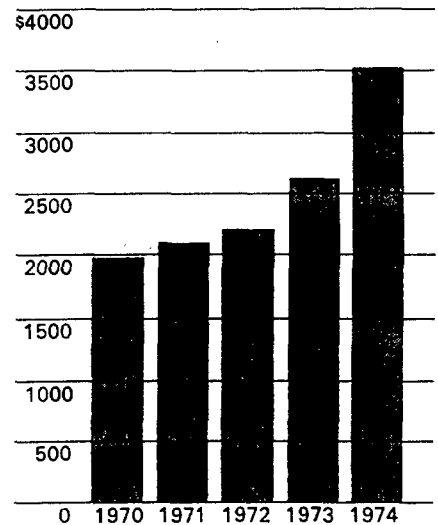
Quarterly earnings for 1974, as stated below, have been restated for the change in accounting for the valuation of inventories.

Sales and Earnings — by Quarter — 1974 vs. 1973

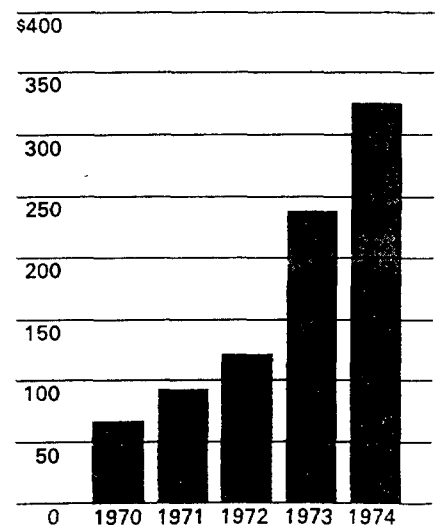
	Net Sales	Net Income	Earnings per Share	
			Primary	Fully Diluted
1974:				
First Quarter . . .	\$ 838.2	\$ 94.5	\$2.74	\$2.58
Second Quarter . .	922.2	108.0	3.12	2.92
Third Quarter . . .	956.7	74.8	2.10	1.98
Fourth Quarter . . .	780.8	45.9	1.29	1.25
Year	\$3,497.9	\$323.2	\$9.25	\$8.73
1973:				
First Quarter . . .	\$ 695.1	\$ 73.8	\$2.16	\$2.04
Second Quarter . .	665.0	65.2	1.90	1.79
Third Quarter . . .	628.3	54.9	1.58	1.49
Fourth Quarter . . .	659.3	44.4	1.26	1.22
Year	\$2,647.7	\$238.3	\$6.90	\$6.54
Improvement	\$ 850.2	\$ 84.9	\$2.35	\$2.19

A review of quarterly sales and operating income, by lines of business, sets forth the varying impact of the early-in-the-year seasonal demand for agricultural products, the impact of the elimination of U.S. price controls in the second quarter and the worldwide softening of demand for textile, plastic and rubber chemical products in the latter part of the year. Operating income is defined as income before other income, other income charges, interest charges and the provision for income taxes.

Net Sales



Net Income



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1974 Sales by Lines of Business

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
Agricultural Products	\$179.0	\$116.4	\$ 60.6	\$ 54.7	\$ 410.7
Commercial Products	106.4	132.8	125.2	133.4	497.8
Industrial Chemicals	191.9	236.5	264.0	254.7	947.1
Polymers & Petrochemicals	172.8	227.3	250.9	203.6	854.6
Textiles	188.1	209.2	256.0	134.4	787.7
Total Company	\$838.2	\$922.2	\$956.7	\$780.8	\$3,497.9

1974 Operating Income by Lines of Business

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
Agricultural Products	\$ 91.7	\$ 60.8	\$ 24.6	\$25.2	\$202.3
Commercial Products	5.8	4.8	2.2	(8.0)	4.8
Industrial Chemicals	30.7	49.6	35.7	55.5	171.5
Polymers & Petrochemicals	2.9	48.0	61.0	24.5	136.4
Textiles	22.2	27.7	2.9	(17.6)	35.2
Total Company	\$153.3	\$190.9	\$126.4	\$79.6	\$550.2

Sales and operating income by lines of business for the last four years are included in the sections on the five operating companies. The Company does not believe that it can present similar information for 1970 because a policy change in transfer pricing between its lines of business and a combination of revised product groupings and volume changes would preclude the presentation of comparable results.

Worldwide Operations

In 1974, business in all world areas increased significantly over the 1973 levels. Exports from the United States and sales of products manufactured abroad amounted to \$999.7 million — an improvement of \$235.9 million or 31 per cent over the \$763.8 million level of 1973.

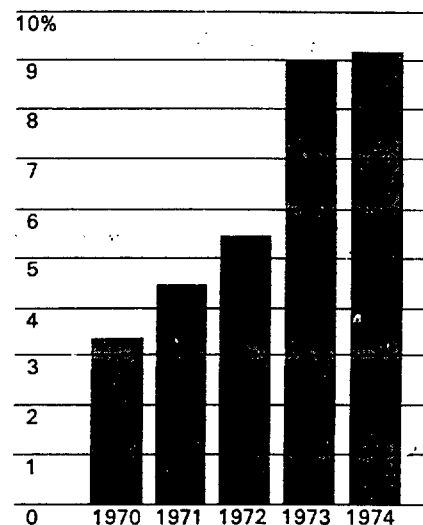
Sales by World Area

	1974	1973	1974 Over 1973		Per cent of 1974 Sales
			Amount	Per cent	
United States	\$2,498.2	\$1,883.9	\$614.3	33%	71%
Exports from U.S.	296.2	230.6	65.6	28	9
Europe	480.0	363.8	116.2	32	14
Canada	96.5	67.3	29.2	43	3
Latin America	48.4	30.0	18.4	27	1
Other World Areas	78.6	54.5	24.1	23	2
Total Company	\$3,497.9	\$2,502.2	\$995.7	32%	100%

Reflecting the increased business throughout the world, operating income attained record levels in all areas. Operating income for all foreign subsidiaries reached \$117.7 million in 1974, an increase of \$91.5 million in 1973. In addition, the Company received income of nonconsolidated foreign affiliates, and royalty income from other foreign licensees amounted to \$14.5 million in 1974, compared with \$13.4 million in 1973.

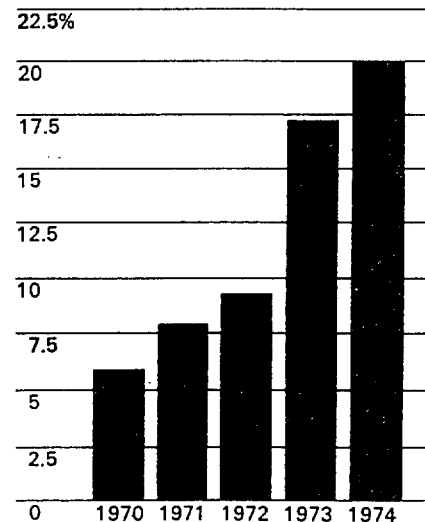
Net Income

(as a per cent of net sales)



Net Income

(as a per cent of average shareowners' equity)



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Financial Review

(Dollars in charts and tables in millions, except per share)

Sales by Product Group

In 1974, sales of all major product groups improved significantly over 1973, continuing the trend of recent years. Industrial Chemicals showed the largest improvement — up \$280.6 million or 42.1 per cent — followed by an improvement of \$261.1 million or 44.0 per cent for Polymers & Petrochemicals. Agricultural Products showed the largest percentage gain with an improvement of \$127.3 million or 44.9 per cent over 1973.

Sales by Product Group

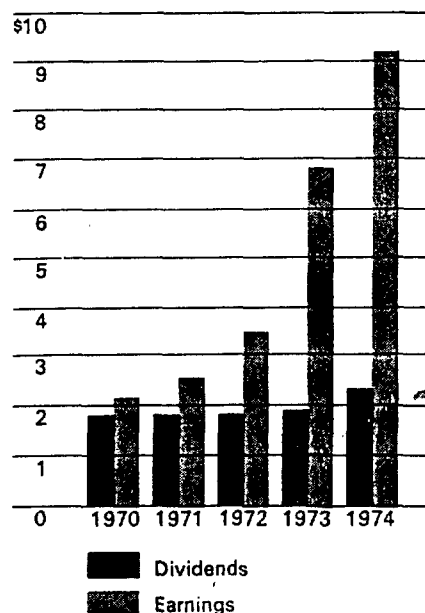
	1974	1973	1972	1971	1970
Agricultural Products:					
Herbicides, Insecticides and Other Products	\$ 410.7	\$ 283.4	\$ 222.3	\$ 199.7	\$ 200.3
Commercial Products:					
Process Controls and Electronics	212.4	194.3	137.3	125.0	122.5
Plastic Products	160.7	146.3	144.4	134.8	124.7
Chemical and Environmental Systems	85.2	41.8	39.9	52.8	35.2
Other Products	39.5	16.6	19.5	16.2	17.8
Industrial Chemicals:					
Rubber and Specialty Chemicals	407.6	305.0	255.6	245.5	234.9
Process Chemicals and Plasticizers	292.7	193.1	160.0	142.8	136.7
Phosphates and Detergents	246.8	168.4	156.7	156.0	173.1
Polymers & Petrochemicals:					
Plastic Materials	578.9	435.6	346.5	310.4	280.6
Petrochemicals	224.9	128.4	112.7	106.3	97.1
Oil & Gas Production and Exploration	50.8	29.5	27.8	27.5	26.1
Textiles:					
Man-Made Fibers	787.7	705.3	532.9	482.9	445.6
Sales from Continuing Operations	\$3,497.9	\$2,647.7	\$2,155.6	\$1,999.9	\$1,894.6
Sales from Discontinued Operations	—	—	69.8	87.2	77.0
Total Company	\$3,497.9	\$2,647.7	\$2,225.4	\$2,087.1	\$1,971.6

Analysis of Earnings Improvement

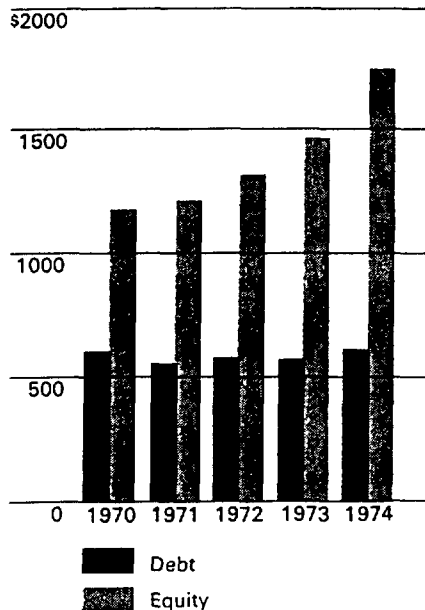
The improvement in 1974 earnings over those for 1973 primarily reflected the Company's ability to price its products on an historical margin basis as the cost of materials, labor and services escalated sharply. Additionally, the change to the LIFO method of accounting for substantially all United States inventories increased 1974 raw material and other manufacturing costs by \$2.26 per share. As measured on a primary earnings per share basis, these actions, partially offset by unfavorable changes in volume and mix late in the year, resulted in an increase in operating income of \$2.48 per share. Higher short-term interest rates, coupled with larger average cash balances available for short-term investment, resulted in improved interest income. An increase in interest expense, a higher effective tax rate and an increase in shares outstanding

Earnings & Dividends

(per share)



Shareowners' Equity & Long-Term Debt



combined, however, to more than offset this improvement. In total, primary earnings per common share increased \$2.35.

The year-to-year improvement in earnings for 1973 over 1972 was attributable to higher sales volume and improved product mix. Increases in selling prices, which for United States operations were limited under the Price Control Regulations, were offset by increased costs of raw materials and other operating costs.

A summary of operating results for the years 1965 through 1974 is included on pages 56 and 57.

Analysis of Primary Earnings per Share Improvement

	1974 vs. 1973	1973 vs. 1972
Operating Income:		
Sales Volume and Product Mix.....	\$ (0.44)	\$ 3.46
Higher Selling Prices.....	13.97	2.10
Higher Raw Material Prices.....	(8.91)	(0.85)
Higher Other Manufacturing Costs.....	(0.99)	(0.55)
Higher Start-up Costs.....	(0.08)	(0.03)
Higher Non-manufacturing Expenses.....	(1.07)	(0.61)
Increase in Operating Income.....	\$ 2.48	\$ 3.52
Other Causes:		
Higher Income Credits — Net.....	\$ 0.40	\$ 0.37
Higher Interest Expense.....	(0.07)	(0.03)
Higher Tax Rate.....	(0.29)	(0.29)
Increased Shares Outstanding.....	(0.17)	(0.06)
Discontinued Operations.....	—	(0.10)
Decrease from Other Causes.....	\$ (0.13)	\$ (0.11)
Net Improvement.....	\$ 2.35	\$ 3.41

Financial Position

Monsanto's 1974 year-end financial position reflected additional improvement as net working capital increased by \$113.3 million over 1973 to a level of \$967.8 million. The December 31, 1974 current ratio was 2.9:1. Working capital additions provided by operations totaled \$504.3 million in 1974 compared with \$403.3 million in 1973.

Cash reserves, short-term securities and time deposits at December 31, 1974 amounted to \$324.1 million, representing a \$66.2 million reduction from 1973. This reduction was primarily the result of increased investment in inventories and capital assets. Accounts receivable at December 31, 1974 increased \$35.5 million or 7 per cent over the previous year reflecting the higher sales level. Inventories at the end of 1974 amounted to \$636.8 million — an increase of \$242.7 million over 1973 resulting from both higher inventory costs and increased quantities.

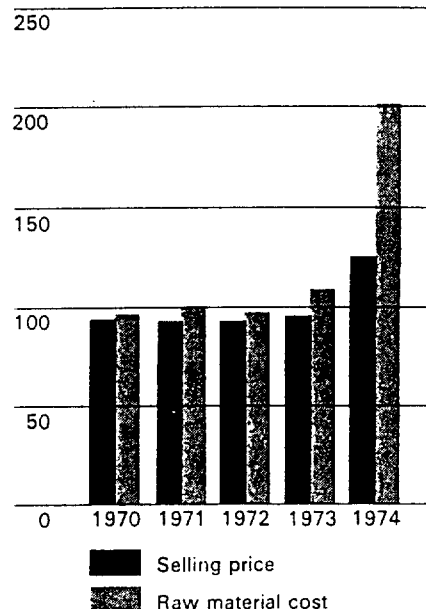
Financing

As a result of Monsanto's strong financial position and cash flow, its working capital requirements and capital expenditures were chiefly financed by internally generated funds in 1974.

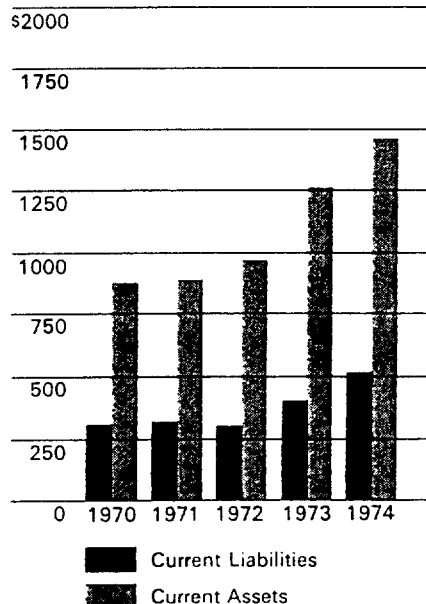
To provide flexibility in financing its future growth, new United States credit facilities of \$230.0 million were arranged with nineteen banks on January

Cost/Price Index

(Domestic and Export)
(Year 1967 = 100%)



Working Capital



Financial Review

(Dollars in charts and tables in millions, except per share)

15, 1975. These arrangements provide for \$115.0 million in short-term lines of credit and a \$115.0 million eight-year revolving credit-term loan agreement, which replace the previous \$100.0 million short-term line of credit. Short-term credit arrangements are also maintained in most foreign countries where Monsanto has significant operations.

As of December 31, 1974, Monsanto's long-term debt was \$587.0 million, representing 25 per cent of its total capitalization compared with 28 per cent at the end of 1973. Monsanto has reduced its debt as a percentage of total capitalization by eight percentage points since year-end 1970. Scheduled debt retirements during the five-year period, 1975-1979, total \$107.2 million.

Capital Expenditures

Monsanto's \$313.4 million investment in new plants and equipment was the highest in its history and compares with \$205.3 million in 1973. Major expenditures during the year were channeled toward increased or new production capacity for textile fibers, plastic materials, *Cycle-Safe* containers for carbonated beverages, acrylonitrile — a key raw material for many of the Company's products — and a number of other product lines where additional capacity was required.

By World Area

	1974	1973	1972	1971	1970
United States	\$253.3	\$165.6	\$114.2	\$144.5	\$232.3
Europe	44.5	25.8	47.1	56.3	59.2
Canada and Latin America ..	11.5	8.0	5.5	3.3	5.0
Other World Areas	4.1	5.9	1.5	1.1	4.3
Total Company	<u>\$313.4</u>	<u>\$205.3</u>	<u>\$168.3</u>	<u>\$205.2</u>	<u>\$300.8</u>

As a part of its long-range plan for sustaining the continued growth of its product lines, the Company anticipates that 1975 capital expenditures will be in the \$500.0 to \$550.0 million range.

Major Operating Expenditures

Major operating expenditures increased significantly as a result of increasing rates of inflation in both the United States and abroad.

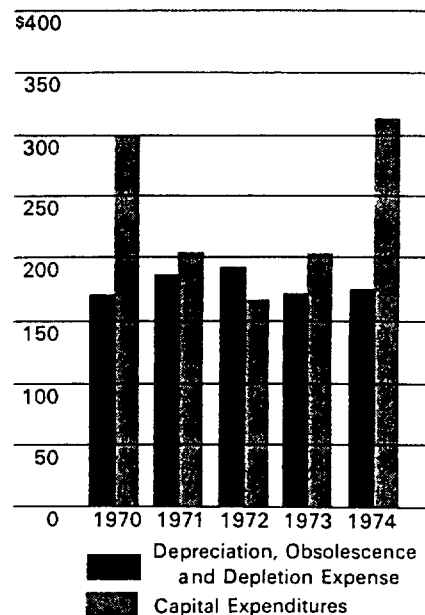
	1974	1973
Purchased Raw Materials	\$1,194.4	\$648.4
Energy and Utilities	195.0	130.1
Wages, Salaries and Employee Benefits	803.3	693.3

During 1974, the prices of Domestic raw materials and energy and utilities increased at rates of 80.0 per cent and 49.4 per cent, respectively. Wages, salaries and employee benefits for the average United States employee rose approximately 11.5 per cent during the year.

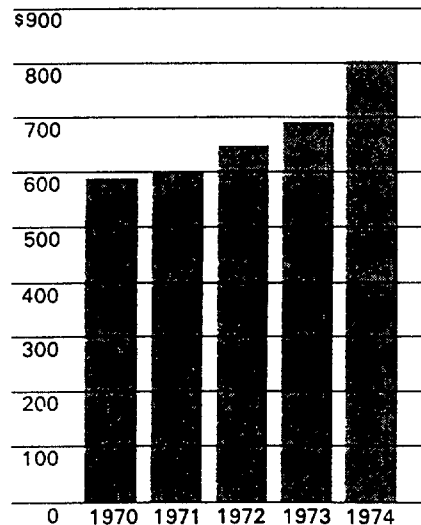
Dividend Payments

Common stock dividends in 1974 amounted to \$77.6 million, equal to \$2.30 per share. Effective in the second quarter of 1974, the Board of Directors

Capital Expenditures & Depreciation Expense



Wages, Salaries and Employee Benefits



increased the quarterly dividend from \$0.50 to \$0.60 per share. A regular cash dividend has been paid quarterly without interruption or reduction since 1928.

Common Stock Dividends

	1974	1973	1972	1971	1970
Dividend Payments:					
First Quarter.....	\$0.50	\$0.45	\$0.45	\$0.45	\$0.45
Second Quarter.....	0.60	0.45	0.45	0.45	0.45
Third Quarter.....	0.60	0.50	0.45	0.45	0.45
Fourth Quarter.....	0.60	0.50	0.45	0.45	0.45
	<u>\$2.30</u>	<u>\$1.90</u>	<u>\$1.80</u>	<u>\$1.80</u>	<u>\$1.80</u>
Primary Earnings*.....	\$9.25	\$6.90	\$3.49	\$2.65	\$2.17
Dividends as a Per cent of Earnings*.....	25%	28%	52%	68%	83%

*Before extraordinary items

Preferred stock dividends amounted to \$6.3 million in 1974 or \$2.75 per share. Quarterly dividends of \$0.6875 per share have been paid regularly since issuance of the preferred shares in 1969.

Shareowners' Equity

Shareowners' equity was \$1,755.0 million at December 31, 1974 — up 18 per cent from \$1,483.7 million as of the end of 1973. Book value increased from \$44.26 per common share at the end of 1973 to \$51.39 as of December 31, 1974.

For 1974, net income was 9.2 per cent of sales, compared with 9.0 per cent for 1973. Net income as a percentage return on average shareowners' equity was 20.0 per cent in 1974, as compared with 17.2 per cent for 1973.

Capital Stock

Monsanto common stock is traded on the New York Stock Exchange and certain other major exchanges throughout the world, including the London, Paris, Amsterdam and certain Swiss and Belgian Exchanges. The Company's preferred stock is traded on the New York Stock Exchange.

The high and low sales prices on the New York Stock Exchange, by quarter, for 1974 and 1973 are indicated below:

Common Stock Prices

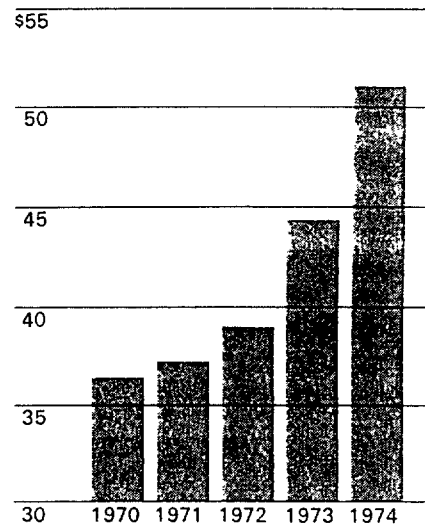
	1974		1973	
	High	Low	High	Low
First Quarter.....	63-1/2	48-7/8	55-1/4	47-3/4
Second Quarter.....	69-1/2	57-1/8	57-1/4	49-1/8
Third Quarter.....	64-7/8	44-1/8	67-3/8	50-1/8
Fourth Quarter.....	53-1/4	39-3/8	75-3/4	43-1/8

Preferred Stock Prices

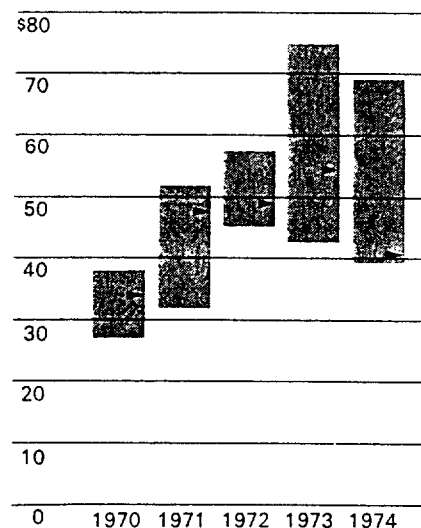
	1974		1973	
	High	Low	High	Low
First Quarter.....	70-3/4	58	66	59-1/2
Second Quarter.....	77-3/8	64	68	61-3/4
Third Quarter.....	71-1/8	55	75	62
Fourth Quarter.....	58-3/4	45-1/2	84	58-1/2

Book Value

(per share)



Common Stock Price Range



► At December 31

Summary of Significant Accounting Policies

Basis of Consolidation — The consolidated financial statements include Monsanto Company (the Company) and all its domestic and foreign subsidiaries in which it has more than a 50 per cent interest. All significant intercompany transactions have been eliminated.

Foreign currency assets and liabilities are translated into United States dollars at approximate year-end rates, except that fixed assets are translated at exchange rates prevailing at the dates acquired. Income and expense items are translated at approximate average rates in effect during the year, except depreciation which is translated at the approximate rates prevailing when the fixed assets were acquired.

Year-end currency exchange and translation gains and losses are recorded in a reserve for foreign operations. Losses in excess of the reserve balance are charged to income currently.

Investments in the common stock of certain affiliates considered joint ventures, in which the Company has 20 per cent but not more than 50 per cent interest, are accounted for by the equity method.

Construction Contracts — Monsanto Enviro-Chem Systems, Inc., a subsidiary, reports income on its long-term contracts on the percentage-of-completion basis. Losses on such contracts are reported in the period first recognized.

Depreciation and Depletion — The Company and its subsidiaries generally use the straight line method of computing depreciation on assets, however, the sum of the years digits method is used on most domestic assets placed in service prior to January 1, 1972. Depreciation rates are based on the estimated useful lives of the individual assets. Depreciation and depletion of mineral rights and oil and gas properties are computed by the unit of production method based upon estimated recoverable reserves.

Income Taxes — The Company follows the practice of reducing its provision for current income taxes by the full amount of its investment tax credits.

Accelerated methods of depreciation and, for machinery and equipment, guideline lives and Asset Depreciation Range System class lives are used in computing depreciation for income tax purposes.

Income on long-term contracts of Monsanto Enviro-Chem Systems, Inc., is recognized on the completed contract basis for income tax purposes.

Deferred income taxes are provided for amounts which affect financial and taxable income in different periods.

Inventory Valuation — Inventories are stated at the lower of cost or market. Effective January 1, 1974, the method of determining cost for substantially all domestic inventories was changed from the first-in, first-out (FIFO) basis to the last-in, first-out (LIFO) basis. The cost for other inventories continues to be determined generally on the first-in, first-out (FIFO) basis.

Pension Plans — Pension costs include charges applicable to current service and amortization of unfunded prior service costs, wherever applicable, generally over periods ranging from 15 to 30 years. It is the policy to fund pension costs accrued.

Technological Expenses — Research, development, engineering and patent expenditures are charged to income as incurred.

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Monsanto Company and Subsidiaries

Statement of Consolidated Income

(Dollars in millions, except per share)

	Year 1974	Year 1973
Net Sales	\$3,497.9	\$2,647.7
Cost of Goods Sold	2,548.2	1,904.0
Marketing and Administrative Expenses	273.4	236.4
Technological Expenses	126.1	101.1
	<u>2,947.7</u>	<u>2,241.5</u>
Operating Income	550.2	406.2
Income Charges (Credits):		
Interest expense	43.0	38.9
Other — net	(67.1)	(43.8)
	<u>(24.1)</u>	<u>(4.9)</u>
Income Before Income Taxes	574.3	411.1
Provision for Income Taxes:		
Current	227.4	170.0
Deferred	23.7	2.8
	<u>251.1</u>	<u>172.8</u>
Net Income	\$ 323.2	\$ 238.3
Earnings per Common Share:		
Primary	\$9.25	\$6.90
Fully diluted	8.73	6.54

The above statement should be read in conjunction with page 44 and pages 50 through 55 of this report.

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Statement of Consolidated Financial Position

(Dollars in millions, except per share)

ASSETS

Dec. 31,
1974

Dec. 31,
1973

Current Assets:

Cash

\$ 32.3

\$ 42.4

Short-term securities and time deposits, at cost which approximates market

291.8

347.9

Receivables, net of allowances of \$16.2 in 1974 and \$20.6 in 1973

520.8

485.3

Inventories

636.8

394.1

1,481.7

1,269.7

Investments and Miscellaneous Assets:

Investments in affiliates — at equity

64.6

46.4

Miscellaneous investments and receivables — at cost or less

38.8

41.7

103.4

88.1

Property, Plant and Equipment, at Cost:

Land

35.9

29.4

Buildings

452.0

424.4

Machinery and equipment

2,510.6

2,250.1

Mineral rights and oil and gas properties

158.0

147.7

3,156.5

2,851.6

Less accumulated depreciation and depletion, etc.

1,844.9

1,699.2

Net property

1,311.6

1,152.4

Deferred Charges

41.3

35.1

\$2,938.0

\$2,545.3

The above statement should be read in conjunction with page 44 and pages 50 through 55 of this report.

LIABILITIES AND SHAREOWNERS' EQUITY

**Dec. 31,
1974**

**Dec. 31,
1973**

Current Liabilities:

Accounts payable and accruals

\$ 408.6

\$ 307.1

Income taxes

91.0

93.4

Current portion of long-term debt

14.3

14.7

513.9

415.2

Long-Term Debt—Less Current Portion Above

587.0

579.3

Other Liabilities and Deferred Credits:

Deferred income taxes

53.7

30.0

Miscellaneous

28.4

37.1

82.1

67.1

Shareowners' Equity:

Preferred stock—authorized, 10,000,000 shares without par value, issuable in series; outstanding, 2,234,069 shares in 1974 and 2,316,269 shares in 1973

5.0

5.2

Common stock—authorized, 50,000,000 shares, par value \$2 each, issued, 34,362,261 shares in 1974 and 33,709,617 shares in 1973

68.7

67.4

Paid-in surplus

631.4

613.1

Retained earnings

1,062.5

810.5

1,767.6

1,496.2

Less common stock in treasury, at cost (308,302 shares in 1974 and 307,206 shares in 1973)

12.6

12.5

1,755.0

1,483.7

\$2,938.0

\$2,545.3

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Statement of Changes in Consolidated Financial Position

(Dollars in millions)

	Year 1974	Year 1973
Source of Working Capital:		
Net income	\$323.2	\$238.3
Income charges (credits) not affecting working capital:		
Depreciation, obsolescence and depletion	171.9	170.3
Deferred income taxes	23.7	2.8
Other—net	(14.5)	(8.1)
Working capital from operations	504.3	403.3
Outside financing	8.0	6.6
Property disposals	18.6	15.9
Proceeds from issuance of capital stock	16.9	19.2
	547.8	445.0
Application of Working Capital:		
Capital expenditures	313.4	205.3
Dividends	83.9	69.3
Debt reduction	18.7	20.1
Other—net	18.5	(26.3)
	434.5	267.8
Net Increase in Working Capital	\$113.3	\$177.2
Changes in Elements of Working Capital:		
Increase (decrease) in current assets:		
Cash and marketable securities	\$ (66.2)	\$195.6
Net receivables	35.5	85.1
Inventories	242.7	(0.2)
	212.0	280.5
(Increase) decrease in current liabilities:		
Accounts payable and accruals	(101.5)	(44.0)
Income taxes	2.4	(57.2)
Current portion of long-term debt	0.4	(2.1)
	(98.7)	(103.3)
Net Increase in Working Capital	\$113.3	\$177.2

The above statement should be read in conjunction with page 44 and pages 50 through 55 of this report.

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Monsanto Company and Subsidiaries

Statement of Shareowners' Equity

(Dollars in millions, except per share)

	Capital Stock		Paid-in Surplus	Retained Earnings	Treasury Stock	Total
	Preferred	Common				
Balance, January 1, 1973	\$5.2	\$66.6	\$593.0	\$ 641.5	\$(12.5)	\$1,293.8
Net income				238.3		238.3
Dividends:						
Preferred—\$2.75 per share				(6.4)		(6.4)
Common—\$1.90 per share				(62.9)		(62.9)
Amounts received for shares of capital stock issued under stock option plans:						
Preferred—8,500 shares	—		0.4			0.4
Common—337,557 shares		0.7	15.5			16.2
Conversion value of common stock issued to holders of convertible loan stock of Monsanto Limited—47,573 shares		0.1	2.5			2.6
Conversion of 13,841 shares of \$2.75 preferred stock to 15,499 shares of common stock	—	—	—			—
Income tax benefits resulting from exercises and dispositions of option stock by employees			1.7			1.7
Balance, December 31, 1973:						
As previously reported	5.2	67.4	613.1	810.5	(12.5)	1,483.7
Adjustments and issuance of 226,770 shares of common stock for the acquisition of the net assets of Olympia Industries, Inc., accounted for as a pooling of interests		0.4	1.3	12.7		14.4
As restated	5.2	67.8	614.4	823.2	(12.5)	1,498.1
Net income				323.2		323.2
Dividends:						
Preferred—\$2.75 per share				(6.3)		(6.3)
Common—\$2.30 per share				(77.6)		(77.6)
Amounts received for shares of capital stock issued under stock option plans:						
Preferred—400 shares	—		—			—
Common—240,382 shares		0.5	11.3			11.8
Conversion value of common stock issued to holders of convertible loan stock of Monsanto Limited—92,989 shares		0.2	4.9			5.1
Conversion of 82,600 shares of \$2.75 preferred stock to 92,503 shares of common stock	(0.2)	0.2	—			—
Income tax benefits resulting from exercises and dispositions of option stock by employees			0.8			0.8
Cancellation value of common stock purchased for employees under stock purchase plan					(0.1)	(0.1)
Balance, December 31, 1974	\$5.0	\$68.7	\$631.4	\$1,062.5	\$(12.6)	\$1,755.0

The above statement should be read in conjunction with page 44 and pages 50 through 55 of this report.

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Notes to Financial Statements

(Dollars in millions, except per share)

Accounting Change to LIFO Method of Inventory Valuation

As of January 1, 1974, the Company and certain domestic subsidiaries changed from the first-in, first-out (FIFO) basis of inventory valuation to the last-in, first-out (LIFO) basis for substantially all domestic inventories. This was done because the rapid increase in prices during the year would have resulted in an overstatement of profits if use of the FIFO basis of inventory valuation had been continued, since inventories sold were replaced at substantially higher prices. If the FIFO basis of inventory valuation had been used, inventories at December 31, 1974 would have been \$155.0 higher than reported.

The effect of the change was to decrease 1974 net income by \$77.5 or \$2.26 per primary share.

Acquisition of Olympia Industries, Inc.

On July 29, 1974, the Company acquired Olympia Industries, Inc., a producer of dyed, texturized, continuous-filament polyester yarn and doubleknit polyester fabric, in exchange for 226,770 common shares. The transaction has been accounted for as a pooling of interests.

Olympia's sales and net loss for its fiscal period beginning October 1, 1973 through December 31, 1974, which have been included in the Company's 1974 consolidated operating results, amounted to \$69.7 and \$3.7, respectively. The 1973 financial statements were not restated for this acquisition since the effect on consolidated results of operations was not material.

Bank Credit Agreements

On March 1, 1973, the Company arranged with 16 banks for domestic short-term bank credit facilities of \$100.0. Interest on loans under these facilities would have been related to the prime commercial rate of each bank. No borrowings were made under these loan arrangements.

On January 15, 1975, the credit facilities discussed above were replaced by new domestic credit facilities aggregating \$230.0 with 19 banks. These arrangements provide \$115.0 under a revolving credit-term loan agreement plus an additional \$115.0 of short-term lines of credit. Loans under the revolving credit-term loan agreement will bear interest related to the prime commercial rate of the agent bank, First National City Bank, New York; loans under the short-term lines of credit will bear interest related to the prime commercial rate of the various banks. No borrowings were made under either of these loan arrangements through February 14, 1975.

Depreciation, Obsolescence and Depletion

Charges against income were:

	1974	1973
Depreciation and amortization	\$156.7	\$153.1
Obsolescence	11.6	13.5
Depletion	3.6	3.7
	<u>\$171.9</u>	<u>\$170.3</u>

Earnings per Common Share

Income and the number of shares used in the computation of earnings per common share were determined as follows:

	1974		1973	
	Primary	Fully Diluted	Primary	Fully Diluted
Income				
Net income	\$323.2	\$323.2	\$238.3	\$238.3
Preferred dividends	(6.3)		(6.4)	
Interest (less tax) on				
Loan stock of Monsanto Limited	0.5	0.5	0.7	0.7
Debentures of Monsanto				
International Finance Company		0.6		0.6
	<u>\$317.4</u>	<u>\$324.3</u>	<u>\$232.6</u>	<u>\$239.6</u>

Number of Shares				
(In thousands)				
Weighted average shares				
Outstanding	33,905	33,905	33,169	33,169
Incremental shares for outstanding				
stock options	51	53	81	106
Shares issuable upon conversion of:				
Loan stock of Monsanto Limited	366	366	459	459
Debentures of Monsanto				
International Finance Company		283		281
\$2.75 Preferred Stock		2,552		2,606
	<u>34,322</u>	<u>37,159</u>	<u>33,709</u>	<u>36,621</u>

Employee Stock Options

A new stock option plan was approved as part of the Monsanto Management Incentive Plan of 1974. The status of authorized common shares for this and other stock option plans and the changes occurring during the year were:

	1974 Plan	1969 Plan	1964 Plan
Outstanding 1/1/74	—	521,749	11,140
Unoptioned 1/1/74	—	59,918	—
Optioned during year	146,200	17,000	—
Exercised during year	—	229,242	11,140
Expired during year	—	2,555	—
Terminated during year	250	681	—
Outstanding 12/31/74	145,950	306,271	—
Unoptioned 12/31/74	804,050	—	—

Under the above plans, options for 452,221 shares were outstanding at prices ranging from \$32.50 to \$68.31 per share, or a weighted average of \$49.96 per share.

The 400 authorized shares of \$2.75 Preferred Stock outstanding at December 31, 1973 under the stock option plan for employees of the former Fisher Governor Company were exercised in 1974.

Equity in Affiliates and Foreign Subsidiaries

The Company's equity in the unaudited net income of affiliates totaled \$12.6 in 1974 and is included in other income. Equity in net income of affiliates was \$13.5 in 1973.

The Company's equity in the net income of foreign subsidiaries was \$62.3 in 1974 and \$43.4 in 1973. The Company's equity in the net assets of these companies at December 31, 1974 and 1973 was \$412.8 and \$345.7, respectively.

Consolidated retained earnings at December 31, 1974, included \$250.1 of the undistributed earnings of these affiliates and foreign subsidiaries. The remittance of a substantial portion of these earnings has been indefinitely

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Notes to Financial Statements

(Dollars in millions, except per share)

postponed since they have been or will be reinvested by the companies. Any tax on dividends which may be received will be substantially offset by foreign tax credits. Consequently, no provision has been made for U.S. taxes on these undistributed earnings.

Exchange and Translation Gains and Losses

Of the \$6.4 net exchange and translation losses in 1974, \$1.2 was charged to the Company's reserve for such losses (an amount equal to the balance as of December 31, 1973) and \$5.2 was charged to income. Net exchange and translation losses of \$5.6 were charged to the reserve in 1973.

Income Taxes

The components of the provision for current income taxes were:

	1974	1973
Federal	\$158.7	\$130.6
State	18.2	9.5
Foreign	50.5	29.9
	<u>\$227.4</u>	<u>\$170.0</u>

The 1974 provision for income taxes is 43.7 per cent of income before income taxes (42.0 per cent in 1973) as compared to the statutory U.S. federal income tax rate of 48 per cent. The difference arises from reduction of the provision for income taxes by the amount of investment tax credits (\$8.5 in 1974 and \$6.7 in 1973), the tax treatment afforded the earnings of domestic international sales corporations (DISC), capital gains and depletion allowances, state and local income taxes, and lower foreign income taxes in relation to pretax foreign income.

Key Employee Bonus

For 1974, the maximum allowable credit to the Bonus Reserve for the Monsanto Management Incentive Plan of 1974 which was approved by the Company's stockholders was \$26.9. The Executive Compensation and Development Committee, at its discretion as provided in the Plan, determined that only \$5.7 of the above amount should be charged against 1974 earnings and credited to the Bonus Reserve. The 1974 bonus awards aggregating \$5.1 were made to 17 directors and officers and 360 other key employees. In 1973 a bonus provision of \$5.8 was charged to earnings and awards totaled \$4.1. After giving effect to the 1974 transactions, a balance of \$3.1 was carried forward in the Bonus Reserve for future years' awards.

Leases and Contingent Liabilities

The Company and its subsidiaries were contingently liable as guarantors of bank loans and for customers' receivables discounted aggregating approximately \$34.3 at December 31, 1974, and \$21.1 at the end of 1973.

Commitments in connection with uncompleted additions to property aggregated approximately \$226.2 and \$69.5 at December 31, 1974 and 1973, respectively.

Rentals under leases with a remaining term of more than one month were approximately \$32.1 in 1974 and \$24.0 in 1973.

Legal Proceedings

The Company and its subsidiaries are parties to a number of lawsuits arising in the normal course of business. While the results of litigation cannot be

predicted with certainty, management based upon advice of Company counsel, believes that the final outcome of such litigation will not have a materially adverse effect on the consolidated financial position or operations of the Company and its subsidiaries.

Long-Term Debt

The long-term debt of the Company and its subsidiaries at December 31, 1974 and 1973, exclusive of current maturities, and repayable in U. S. dollars, except where indicated, was as follows:

	1974	1973
Parent Company:		
6½%-8½% bank loan due 1975/1985 (West German deutsche mark)	19.6	19.3
4½% promissory notes due 1993	81.3	86.0
9½% sinking fund debentures due 2000	150.0	150.0
3½% income debentures due 2002	91.0	91.0
4½% income debentures due 2008	50.0	50.0
Monsanto International Finance Company:		
4½% guaranteed sinking fund debentures due 1985 (a)	25.0	25.0
Monsanto International N.V. (Netherlands Antilles subsidiary):		
8½% guaranteed sinking fund debentures due 1985	13.0	15.8
5½% guaranteed bonds due 1987 (Swiss franc)	30.4	25.0
Monsanto Limited (United Kingdom subsidiary) (British pound):		
6% debentures due 1977/1982	4.2	4.5
5% debentures due 1982	5.4	5.6
5% guaranteed loan stock due 1982/1986 (b)	17.4	22.3
5% guaranteed loan stock due 1992/1997	3.5	3.5
6½% guaranteed loan stock due 1992/1997	3.5	3.5
Monsanto (Suisse) S.A. (Swiss subsidiary) (Swiss franc):		
6½% guaranteed sinking fund debentures due 1985	11.4	9.4
6½% guaranteed sinking fund debentures due 1986	19.0	15.6
Monsanto Europe S.A. (Belgian subsidiary) (Belgian franc):		
9% guaranteed bank loan due 1975/1986	22.7	22.5
8.6% guaranteed bank loan due 1975/1983 (c)	12.2	12.5
Other	27.4	17.8
Total (d)	\$587.0	\$579.3

Notes:

- These debentures are guaranteed by the Company and are currently convertible into Monsanto common stock at \$88 per share, subject to adjustment under certain conditions.
- This loan stock is guaranteed by the Company and is convertible into Monsanto common stock at the approximate rate of one share per 22 pounds 92 new pence (\$54 at December 31, 1974 exchange rate), subject to adjustment under certain conditions.
- Interest on this bank loan was reduced by a government subsidy of 2% which expired in 1974.
- Maturities and sinking fund requirements on long-term debt for the five years ending December 31, 1979, are as follows:

	1975	1976	1977	1978	1979
6½%-8½% bank loan	\$ 1.0	\$ 2.1	\$ 2.1	\$ 2.1	\$ 2.1
4½% promissory notes	4.7	4.7	4.7	4.7	4.7
9½% sinking fund debentures	—	6.0	6.0	6.0	6.0
4½% guaranteed sinking fund debentures	—	2.5	2.5	2.5	2.5
Bank loans (Monsanto Europe S.A.)	3.6	3.6	3.6	3.6	3.6
Other	5.0	6.3	3.4	3.3	4.3
	<u>\$14.3</u>	<u>\$25.2</u>	<u>\$22.3</u>	<u>\$22.2</u>	<u>\$23.2</u>

Notes to Financial Statements

(Dollars in millions, except per share)

Pension Plans

The Company and its subsidiaries have several pension plans covering substantially all of their employees.

The value of the assets in the pension funds declined sharply during 1974, reflecting the general decline in the market value of common stock investments. As a result, the market value of the assets is below the value used for actuarial purposes. An additional contribution of \$10.5 was made in 1974 to certain pension funds to begin amortizing this difference.

The total provision for pension costs increased from \$35.9 in 1973 to \$47.2 in 1974.

The actuarially computed value of the vested benefits for plans of the Company and certain domestic subsidiaries exceeded the market value of the assets in the related pension funds by \$68.1 as of December 31, 1974.

Although the Company and its actuary cannot, as yet, determine the exact effect which compliance with the Employee Retirement Income Security Act of 1974 and the administrative rulings to be issued thereunder will have on the Company's pension costs, there is no reason to believe that such compliance will result in a material increase in pension expense.

Preferred Stock

The outstanding preferred stock is stated at \$2.24 per share and has a cumulative dividend of \$2.75 per share. It is convertible at any time into Company common stock at the initial rate of 1.12 shares of common for each share of preferred, subject to adjustment in certain events under antidilution provisions. The stock may be redeemed at the Company's option any time on or after August 12, 1974, at \$73 per share, which amount is also the voluntary liquidation preference. The involuntary liquidation preference is \$35 per share or an aggregate of \$78.2 in 1974 and \$81.1 in 1973.

Project Cost Overruns

Monsanto Enviro-Chem Systems, Inc., a subsidiary, has projected significant cost overruns on several long-term construction projects. Provisions for cost overruns, based on evaluation of the progress in these projects, reduced net income by \$1.6 and \$12.9 in 1974 and 1973, respectively.

Repairs

Repair and maintenance charges were \$179.2 in 1974 and \$150.9 in 1973.

Research and Development

Research and development expenses for new products or processes or for significant improvements to existing products or processes amounted to \$105.3 in 1974 and \$82.0 in 1973.

Sale of Subsidiary

During 1973 the Company sold Lansil Ltd., a United Kingdom subsidiary, a producer of cellulosic fibers; this transaction resulted in a charge to net income of \$11.3.

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Shares in Treasury

The Company held 308,302 shares of its common stock in treasury for general corporate purposes at December 31, 1974. The Company also held 81,315 shares of its common stock for specific purposes which are included in Miscellaneous Investments in the accompanying statement of financial position at December 31, 1974.

Shares Reserved

At December 31, 1974, there were 4,372,368 shares of common stock reserved for the following purposes:

	Shares
Conversion of \$2.75 Preferred Stock	2,502,157
Stock option plans	1,256,271
Conversion of convertible loan stock of Monsanto Limited	329,850
Conversion of debentures of Monsanto International Finance Company	284,090
	<u>4,372,368</u>

Accountants' Opinion

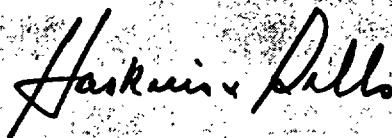
HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

TEN BROADWAY
SAINT LOUIS 63102

Monsanto Company:

We have examined the accompanying consolidated financial statements (pages 44 through 55) of Monsanto Company and Subsidiaries for the years ended December 31, 1974 and 1973. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, such financial statements present fairly the consolidated financial position of Monsanto Company and Subsidiaries at December 31, 1974 and 1973 and the results of their operations and changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied, except for the change in the method of inventory valuation, with which we concur, explained on page 50 in the notes to financial statements, on a consistent basis.



February 14, 1975

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Ten-Year Summary

(In millions, except per share and where italicized)

Operating Results

	1974	1973	1972
Net sales	\$3,498	\$2,648	\$2,225
Operating income	550	406	216
Interest expense	43	39	37
Provision for income taxes	251	173	81
Income before extraordinary items	323 (1)	238	122
Extraordinary charges (credits) — net	—	—	—
Net income	323 (1)	238	122
Per cent of net sales	9.2%	9.0%	5.5%
Per cent of average shareowners' equity	20.0%	17.2%	9.7%

Earnings per common share:

Primary			
Before extraordinary items	\$9.25	\$6.90	\$3.49
After extraordinary items	9.25	6.90	3.49
Fully diluted:			
Before extraordinary items	8.73	6.54	3.40
After extraordinary items	8.73	6.54	3.40

Note: Refer to the management analysis of the results of operations which is included under the caption "Analysis of Earnings Improvement" on page 40 of the report.

Year-End Financial Position

Total assets	\$2,938	\$2,545	\$2,237
Working capital	968	855	677
Property, plant and equipment — gross	3,157	2,852	2,765
Property, plant and equipment — net	1,312	1,152	1,133
Long-term debt	587	579	576
Shareowners' equity	1,755	1,484	1,294

Other Data

Per common share:			
Dividends	\$ 2.30	\$ 1.90	\$ 1.80
Book value	51.39	44.26	39.05
Capital expenditures	\$ 313	\$ 205	\$ 168
Depreciation, obsolescence and depletion	172	170	194

Year End:

Shareowners:			
Common	98,542	98,964	104,369
Preferred	3,709	3,855	3,939
Common shares outstanding	34.1	33.4	33.0
Employees	60,926	58,277	57,891

(1) As of January 1, 1974, the Company and certain of its domestic subsidiaries changed their method of inventory valuation for substantially all United States inventories from the FIFO basis to the LIFO basis. The effect of this change was to decrease 1974 income by \$77.5 or \$2.26 per primary share.

(2) Excludes \$16.0 applicable to extraordinary charges.

<u>1971</u>	<u>1970</u>	<u>1969</u>	<u>1968</u>	<u>1967</u>	<u>1966</u>	<u>1965</u>
\$2,087	\$1,972	\$1,939	\$1,865	\$1,705	\$1,679	\$1,527
178	128	191	214	186	211	219
39	33	22	21	23	24	19
66	35	73	88	71	82	85
94	78	109	116	105	120	130
—	11	(7)	—	(6)	—	—
94	67	116	116	111	120	130
4.5%	3.4%	6.0%	6.2%	6.6%	7.2%	8.5%
7.8%	5.6%	9.8%	10.3%	10.3%	11.9%	14.0%
\$2.65	\$2.17	\$3.08	\$3.26	\$2.96	\$3.48	\$3.86
2.65	1.83	3.28	3.26	3.15	3.48	3.86
2.63	2.17	3.03	3.20	2.92	3.40	3.73
2.63	1.83	3.21	3.20	3.10	3.40	3.73
\$2,154	\$2,145	\$2,012	\$1,957	\$1,908	\$1,906	\$1,815
547	538	510	520	434	396	364
2,735	2,637	2,471	2,345	2,293	2,167	1,982
1,170	1,170	1,071	1,047	1,098	1,105	1,047
558	589	454	473	492	520	501
1,226	1,194	1,205	1,154	1,103	1,044	975
\$ 1.80	\$ 1.80	\$ 1.80	\$ 1.65	\$ 1.60	\$ 1.60	\$ 1.45
37.16	36.27	36.25	34.74	33.31	32.17	30.67
\$ 205	\$ 301	\$ 220	\$ 135	\$ 166	\$ 220	\$ 299
187	170 (2)	164	174	165	154	135
110,490	121,399	118,156	111,538	111,363	95,938	93,538
3,897	3,941	3,621	—	—	—	—
32.8	32.8	33.1	33.1	33.0	32.3	31.6
59,271	62,940	64,604	62,815	62,073	60,697	58,817

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Directors

Charles H. Sommer, St. Louis
Chairman

John W. Hanley, St. Louis
President

H. Harold Bible, St. Louis
Group Vice President

C. Preston Cunningham, St. Louis
Group Vice President

Fredrick M. Eaton, New York
Senior Partner, New York
law firm of
Shearman & Sterling

John R. Eck, St. Louis
Group Vice President

Louis Fernandez, St. Louis
Group Vice President

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

John L. Gillis, St. Louis
Former Monsanto
Senior Vice President

James J. Kerley, St. Louis
Group Vice President

Jean Mayer, Boston
Professor of Nutrition,
Harvard University

Buck Mickel, Greenville, S. C.
Chairman, Daniel International
Corporation, engineering and
construction firm

Edward A. O'Neal, St. Louis
Former Monsanto
Chairman

Edward L. Palmer, New York
Chairman of the
Executive Committee,
First National
City Corporation

Francis E. Reese, St. Louis
Group Vice President

Tom K. Smith Jr., St. Louis
Group Vice President

Monte C. Throdahl, St. Louis
Group Vice President

Earle G. Wheeler, Martinsburg, W. Va.
U.S. Army, Retired.
Former Chairman,
Joint Chiefs of Staff

Transfer Agents

Morgan Guaranty Trust Company
of New York
The Boatmen's National Bank
of St. Louis

Registrars

The Chase Manhattan Bank, N. A.
St. Louis Union Trust Company

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Officers

John W. Hanley
President and Chief Executive
Officer

Charles H. Sommer
Chairman

Group Vice Presidents

Edmond S. Bauer
Monsanto Agricultural Products
Company

H. Harold Bible
Monsanto Industrial Chemicals
Company

C. Preston Cunningham
Operations Staff

John R. Eck
Monsanto Polymers &
Petrochemicals Company

Louis Fernandez
Monsanto Textiles Company

James J. Kerley
Administrative Staff

Francis E. Reese
Facilities and Planning Staff

Tom K. Smith Jr.
Monsanto Commercial Products
Company

Monte C. Throdahl
Technical Staff

Vice Presidents

Robert L. Berra
Personnel

James E. Crawford Jr.
International Division

Edwin J. Putzell Jr.
Secretary and General Counsel

Ernest S. Robson
Energy and Materials Management

Other Officers

Kenneth N. Kermes
Treasurer

Richard C. O'Sullivan
Controller

Regional Vice Presidents

Western Region
Roy L. Brandenburger

Eastern Region
Richard T. Clark

Governmental Affairs
Sam Pickard

March 7, 1975

Printed in U.S.A.

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