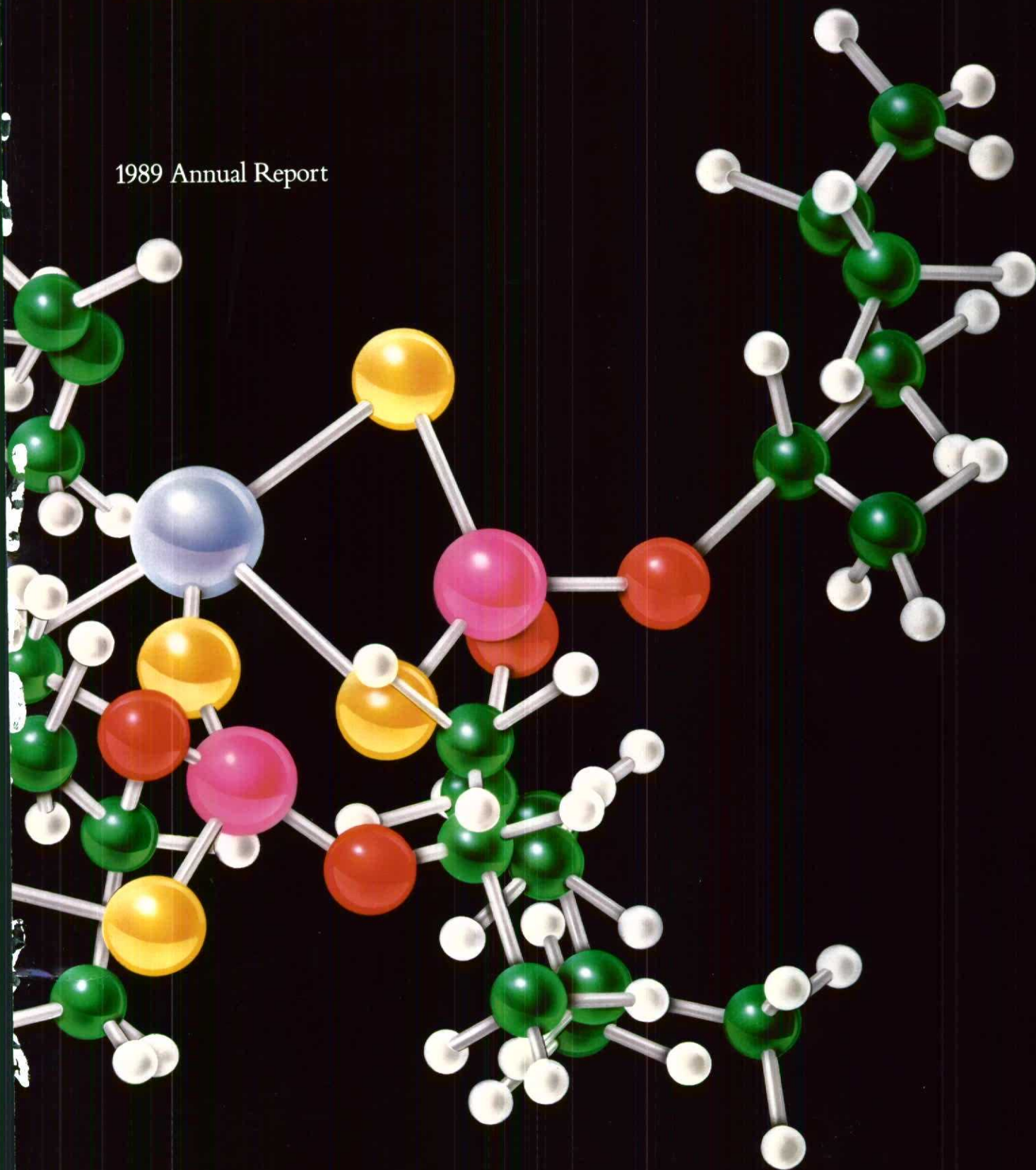


# THE LUBRIZOL CORPORATION

1989 Annual Report



## ABOUT THE COVER

The illustration on the cover was created from a computer-generated model of a zinc dithiophosphate molecule, a chemical which is a building block for a family of intermediate additive products. Molecular modeling is a tool used by research scientists to better understand the chemistry of our products. Lubrizol's research, driven by market demand for new technology, is a key factor in the company's ability to serve the future complex needs of specialty chemical customers. In pursuit of new technology, we use a wide variety of testing techniques requiring many tools, ranging from laboratory vessels to diesel engines. You will see many of these tools as well as some of our products pictured in this report. These tools and the people who use them are essential in creating the superior additive products with which Lubrizol serves its worldwide customers.

## ABOUT THE COMPANY

The Lubrizol Corporation is a specialty chemical company which applies chemical, mechanical and biological technologies to create products that meet the needs of diverse markets worldwide.

Founded in 1928 in Cleveland, Ohio, the company now operates plants, laboratories and offices throughout the world staffed by more than 5,300 employees. Lubrizol focuses on market needs through two business segments, Specialty Chemicals and Agribusiness. The Specialty Chemicals segment serves worldwide transportation and industrial markets. Its major units are Lubrizol Petroleum Chemicals Company and Lubrizol Business Development Company.

Lubrizol Petroleum Chemicals Company is the recognized leader in additive systems for gasoline and diesel motor oils, automatic transmission fluids, gear oils and marine lubricants. Lubrizol Business Development Company uses existing technical resources in the development and marketing of products that meet customer requirements for industrial fluids, fuel additives and specialty chemicals. In addition, this unit also supports commercial technical development and provides venture capital assistance to evolving strategic business units within the Corporation.

The Agribusiness segment, through Agrigenetics Company, carries out research, development and marketing of premium crop seeds and specialty vegetable oils, and markets superior products to the agricultural, food and chemical industries.



# FINANCIAL HIGHLIGHTS

(In Thousands of Dollars Except Per Share Data)

|                                   | 1989        | 1988        | Percent Increase (Decrease) |
|-----------------------------------|-------------|-------------|-----------------------------|
| Revenues                          | \$1,227,910 | \$1,125,731 | 9%                          |
| Net income                        | 93,980      | 139,957     | (33)                        |
| Net income per share              | 2.52        | 3.62        | (30)                        |
| Dividends per share               | 1.38        | 1.30        | 6                           |
| Capital investments               | 82,720      | 71,891      | 15                          |
| Research and development expenses | 69,658      | 65,320      | 7                           |
| Shareholders' equity              | 663,264     | 664,308     | 0                           |
| Total assets                      | 960,184     | 970,671     | (1)                         |

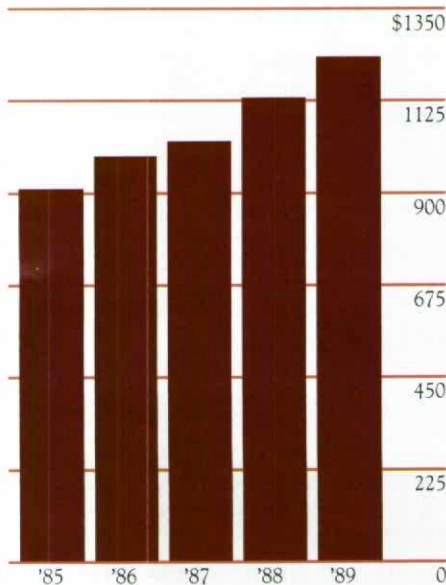
## Common Share Price History

|             | 1989                             |                                  | 1988                             |      |
|-------------|----------------------------------|----------------------------------|----------------------------------|------|
|             | High                             | Low                              | High                             | Low  |
| 1st quarter | \$38 <sup>5</sup> / <sub>8</sub> | \$35 <sup>1</sup> / <sub>8</sub> | \$42 <sup>3</sup> / <sub>8</sub> | \$30 |
| 2nd quarter | 44 <sup>3</sup> / <sub>8</sub>   | 36 <sup>3</sup> / <sub>4</sub>   | 41                               | 33   |
| 3rd quarter | 45 <sup>1</sup> / <sub>8</sub>   | 40 <sup>1</sup> / <sub>8</sub>   | 40 <sup>1</sup> / <sub>2</sub>   | 34   |
| 4th quarter | 41 <sup>3</sup> / <sub>4</sub>   | 34 <sup>1</sup> / <sub>8</sub>   | 40                               | 34   |

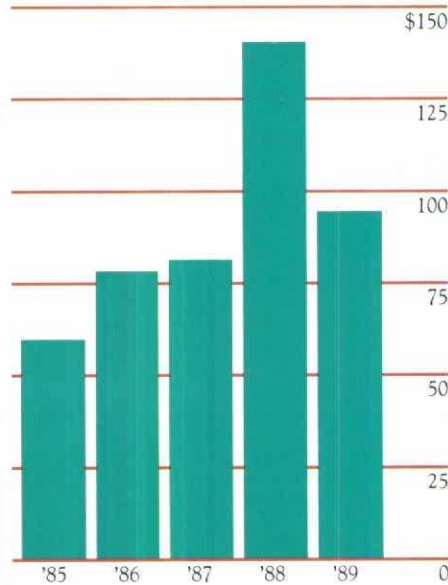
## Dividends per Common Share

|             | 1989          | 1988          |
|-------------|---------------|---------------|
| 1st quarter | \$ .34        | \$ .32        |
| 2nd quarter | .34           | .32           |
| 3rd quarter | .34           | .32           |
| 4th quarter | .36           | .34           |
| Total       | <u>\$1.38</u> | <u>\$1.30</u> |

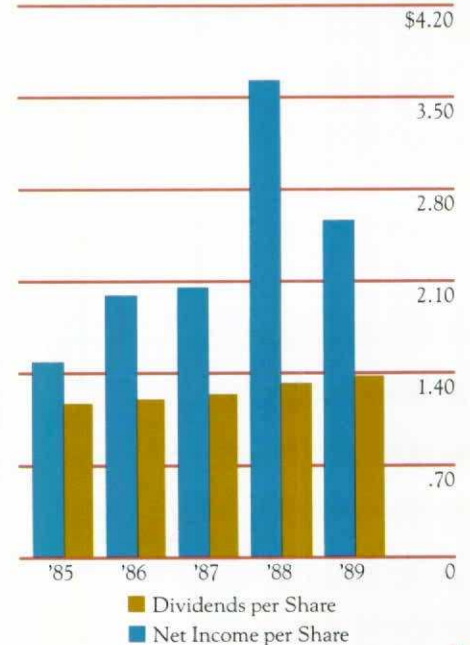
**Revenues**  
(millions)



**Net Income**  
(millions)



**Net Income per Share /  
Dividends per Share**



## TO OUR SHAREHOLDERS

It is a pleasure to have the opportunity to report on our business activities during 1989. During the first six months of the year, customer orders increased substantially over the prior year, and our plants set all time shipping records. Hard work by Lubrizol people resulted in outstanding performance in satisfying our customers. However, in the second half of the year, the level of customer orders was lower and shipments actually decreased in the fourth quarter. We did not lose market share, and we do not believe that this reduction indicated a trend. Increases in both volume and revenues are anticipated in 1990.

The year also presented us with other challenges. Many of these were related to the conditions we encountered in the external and internal business environment that were difficult to control and had a detrimental effect on our business. These included raw material costs that escalated during the first half and remained high for the full year, the strengthening dollar that reduced our returns from overseas sales and our inability to increase selling prices early enough in the year to maintain our margins. The result was that despite significant increases in product shipments our income from operations did not meet expectations.

Consolidated revenues for 1989 were \$1,227,910,000, the highest in the company's history, and were 9 percent ahead of results of 1988. Consolidated net income was \$93,980,000 and net income per share was \$2.52. Excluding unusual items, this income was the second highest in the company's history. Product shipments increased by 7 percent.

Quarterly dividends were increased during the fourth quarter from \$.34 per share to \$.36 per share for an annualized rate of \$1.44 per share. This is the sixth consecutive year in which dividends were raised. Dividends to shareholders in 1989 totaled \$51,509,000.

During the year, the company purchased 1.1 million outstanding shares, an action that will have a favorable impact on earnings per share in the future.

### Specialty Chemicals

The vision that we hold for Lubrizol is to broaden our base as a specialty chemical company. This effort to expand our business includes product, market, technological and geographical diversification. One of the keys to Lubrizol's continued success is the ability to expand the sales of successful products in international markets. During 1989, significant programs were instituted in South America and the U.S.S.R. to enhance our geographical diversification.

South America is an important developing area of the world, and Brazil is the key country in the region. Lubrizol has operated a joint venture manufacturing company in Brazil for several years. Late in 1989 we acquired our partner's interest, and Industria de Aditivos do Brasil S.A. is

now wholly owned. Operating it as a wholly owned company will greatly increase our flexibility and give us the opportunity to more rapidly expand the business by introducing new products and technology. The Brazilian market is challenging due to high inflation and controlled prices, but over the long run, we believe the venture will make a positive contribution to Lubrizol.

SoLub Product Application Laboratory is a new joint venture between Lubrizol Limited, our United Kingdom subsidiary, and three governmental agencies of the Union of Soviet Socialist Republics. This joint venture is the first step in gaining direct experience with the technical challenges and opportunities of the U.S.S.R. lubricants industry. This laboratory will develop and commercialize formulations for high quality lubricants for the U.S.S.R. market using Lubrizol additive systems. Located in the City of Ryazan, it will initially employ ten chemists and engineers.

The U.S.S.R. and the Eastern Bloc countries are a vast market, and Lubrizol is the first additive company to establish direct involvement in this area.

### Environmental

Protecting the environment is one of the major challenges of the 1990s. Throughout this report, you will find references to products that provide the performance required by our customers and in addition are designed to help reduce detrimental effects on the environment. Some of these products are environmentally friendly lubricants, additives for both gasoline and diesel fuel, water-based fluids, specialty chemicals from agriculture and lubricants for engines designed to burn alternate fuels such as methanol. This area gives Lubrizol the opportunity to develop and apply technology to commercial products that are attractive to our customers and meet environmental requirements.

L. E. Coleman



W. G. Bares





### Quality Management

Quality has always been the first priority at Lubrizol. Now we have undertaken a much broader, company-wide program of quality management. Developed by W. Edwards Deming, this more comprehensive concept of quality mandates that we look at our jobs as a process which must be continually improved. We believe that this continuous improvement leads to enhanced products and service and perfectly delighted customers.

More than one thousand of our people, starting with top management and extending to all levels of the company both in the U.S. and overseas, have been trained in the process. This is a costly venture, but we are pleased with our progress. We are convinced that quality management will pay dividends both now and into the future. For instance, in plants, by studying and improving manufacturing processes, we have increased capacity without additional capital spending. In our laboratories, quality management has the potential to reduce time required to produce new products. In our product testing, complex processes have been studied and improved resulting in greater dependability.

Quality management has become an integral part of our corporate culture and will have an increasing impact in terms of efficiency and profitability.

### Agribusiness

Two major developments occurred in our Agribusiness segment this year. In the first, Lubrizol achieved a settlement of class action litigation with the limited partners of a research and development partnership, Agrigenetics Research Associates Limited (ARAL). This litigation was initiated by Lubrizol. We sought a declaration from the court of our right to the technology developed by ARAL. Under the terms of the settlement, Lubrizol acquired the remaining rights to all the partnership's technology. We are currently evaluating this large and potentially valuable body of technology. Some projects will continue to be developed internally. Others will be sold, licensed or developed as joint ventures.

During the third quarter of 1989, Lubrizol acquired Sungene Technologies of San Jose, California. Sungene and a joint venture company, Sunagra, had undertaken a number of agricultural biotechnology research programs under contract with Lubrizol. After the acquisition, these operations were moved to our modern research facility in Madison, Wisconsin. Agrigenetics now has essentially all of its research programs in one location where activities can be concentrated on meeting commercial objectives.

TRISUN<sup>®</sup>, our specialty sunflower oil, continues to gain acceptance in the food industry. This monounsaturated oil has excellent stability, zero cholesterol and is finding application in breakfast cereals, cookies, frozen desserts, non-dairy creamers and baby formula. Testing and acceptance in the food industry is a slow, time-

consuming process, but the superior qualities of the product are becoming recognized. We estimate that 1990 sales will be in excess of 40 million pounds.

### Officers and Directors

At the organizational meeting of the Board of Directors in April 1989, R. John Senz and John A. Studebaker were elected vice presidents. Mr. Senz is also president of Lubrizol Business Development Company and Mr. Studebaker is president of Agrigenetics Company.

Also in April of last year, David T. Morgenthaler resigned from the Board of Directors in accordance with the retirement age policy adopted by the Board. Mr. Morgenthaler had been a director since 1980.

At the Annual Meeting of Shareholders in April, David H. Hoag was elected as a director for a one-year term. Mr. Hoag is president and chief executive officer of LTV Steel Company.

We regret to advise you of the death of Lewis S. Salter on November 19, 1989. Dr. Salter was a professor of physics and former president of Wabash College. He was elected a director of the company in 1980.

### Outlook

The decade of the 1990s promises to be one of change and challenge. Certainly, recent political change has been rapid and generally unexpected. Economic change may not be as rapid, but it will surely come. Your company, with its global operations and its long experience in international marketing, is well positioned to serve these expanding markets. We are optimistic about the future opportunities for Lubrizol.

On behalf of the Board of Directors and the company's more than 5,000 employees, we want to express appreciation for your continued support.



L. E. Coleman

Chairman of the Board

March 14, 1990



W. G. Bares

President

*We regret to advise you of the death of F. Alex Nason on August 14, 1989. Mr. Nason was the last surviving founder of Lubrizol. He was active in the company management for 61 years, serving in many capacities including Chairman of the Board from 1959 to 1964. He was an honorary director at the time of his death.*

*Mr. Nason will be remembered for his many contributions to the company, his good humor and his enthusiasm for Lubrizol, its customers and its people.*



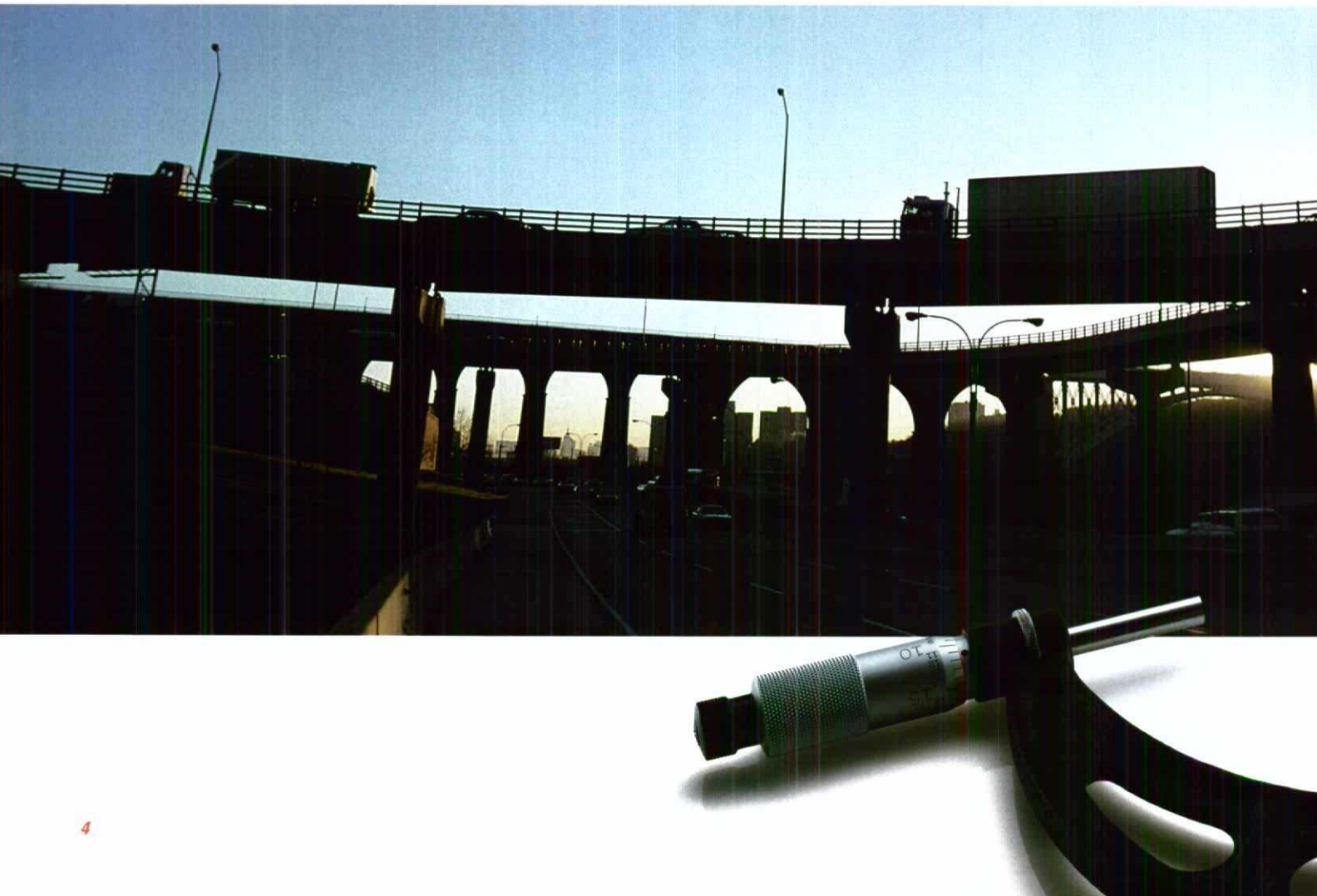
## SPECIALTY CHEMICALS

Changing requirements for lubricants, fuels and industrial fluids have strengthened Lubrizol's position as a leading supplier of additives for transportation and industry. Historically, specialty chemicals have been relied on to improve the characteristics of lubricant base oils and fuels as vehicles and machinery have become more efficient and complex. While this remains their primary role, additives also are making an important contribution in worldwide efforts to protect the environment.

As lubricants and fuel additives, specialty chemicals enable engines to perform to the manufacturers' standards of emission quality. In industrial applications, additives are creating a broad range of special purpose fluids, including those which employ water rather than oil as their basic ingredient. In this application, there is far less environmentally damaging waste material because the bulk of the fluid is water.

To maximize the company's leadership position in serving the petroleum industry and to grow by expanding into additional markets for additive systems, Lubrizol's Specialty Chemicals segment is divided into two companies, Lubrizol Petroleum Chemicals Company (LPCC) and Lubrizol Business Development Company (LBDC).

*Diesel pistons, micrometers, oil samples and gas chromatograph print-outs are among the tools used to develop additives designed to meet exhaust emissions standards scheduled to be implemented in 1992.*





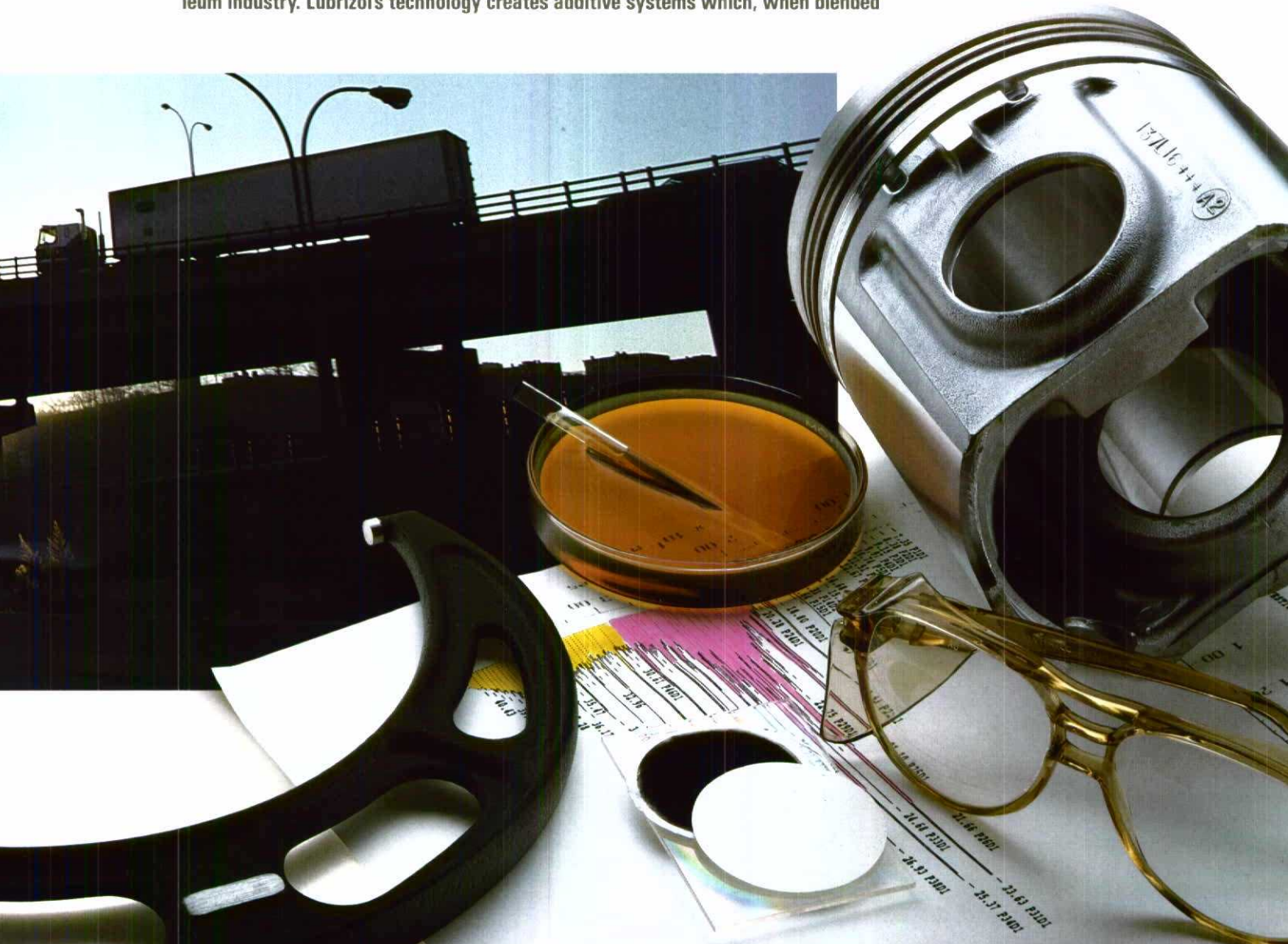
These companies have established market strategies dominated by their commitment to the application of Lubrizol additive technology to meet customer needs.

Technological innovation based on research has been a major factor in Lubrizol's progress throughout its more than 60-year history. Consolidated research expenditures in 1989 were \$69.7 million, or 6% of revenues, and included some \$51.3 million for the development of new specialty chemical products. Product testing costs were \$42.7 million. This dedication to research has resulted in a growing body of intellectual property and has produced more than 1,000 formulations for lubricants and fuels and nearly 200 additives for industrial use.

The world's largest petroleum companies and lubricant formulators are among Lubrizol's more than 4,000 customers. In 1989, North America accounted for 38% of specialty chemical sales, Europe accounted for 32%, the Far East 16% and the remainder was sold in other areas including South America.

### *LUBRIZOL PETROLEUM CHEMICALS COMPANY*

The core of Lubrizol's business is built on meeting the needs of the world's petroleum industry. Lubrizol's technology creates additive systems which, when blended



with petroleum base oils, produce lubricants that meet the highest technical standards and allow customers to establish clear product differentiation for individual market segments. Quality and dependability in oils from widely varying base stocks throughout the world would not be possible without additives.

Lubrizol Petroleum Chemicals Company works in alliance and cooperation with lubricant producers to develop, manufacture and market the lubricants required by increasingly complex engines and drive-trains. Vehicle manufacturers are offering extended warranties on engines and drive-trains, and this has given lubricant producers the opportunity to upgrade their products. At the same time, environmental concerns have focused on the important role additives play in reducing pollution.

### *International Events Create New Market Opportunities*

World markets have been a major source of revenue for the company for many years. Lubrizol is well established in Europe, the Pacific Rim and South America. Current international events have opened the door to new opportunities for the company to serve Eastern Europe and to expand in other parts of the world as well. Worldwide, there are 18 manufacturing facilities, 40 sales and service offices and some 3,000 employees directly involved in the operations of Lubrizol Petroleum Chemicals Company. A number of significant steps were taken in 1989 to heighten the company's role in international markets and to broaden its potential for future growth.

In Brazil, Lubrizol reached an agreement to purchase a joint venture partner's 50 percent interest in Industria de Aditivos do Brasil S. A., and this company is now wholly owned.

By having 100 percent ownership, Lubrizol has much greater operating flexibility and increased opportunity to serve the Brazilian market with a broader spectrum of lubricant additive technology, including products employing the company's latest technology.





This also creates the opportunity for Lubrizol Business Development Company to take advantage of the company's presence in Brazil to expand into additional markets throughout South America.

LPCC is building a dispersant plant in Singapore and is merging its Japanese companies into a single unit. A gear oil additive plant is under construction in France to produce a new generation of extreme pressure additives that are environmentally friendly.

Lubrizol's United Kingdom subsidiary, Lubrizol Limited, has entered into a joint venture with three governmental agencies of the Union of Soviet Socialist Republics to open a laboratory in the City of Ryazan. The facility, SoLub Product Application Laboratory, will develop and commercialize additives for high quality lubricants using Lubrizol additive systems. Initially, it will employ ten chemists and engineers from the U.S.S.R. with Lubrizol providing support through Lubrizol Limited.


Lubrizol Petroleum Chemicals Company has been a supplier of products to the U.S.S.R. market, and the new laboratory will provide direct experience in dealing with the technical challenges and opportunities in serving the U.S.S.R. lubricants market.

### *Product Development Supports A Wide Variety Of Markets*

Research and development in traditional areas such as additives for passenger car motor oil, heavy duty diesel engine oil, automatic transmission fluid, marine oil and gear oil is ongoing and results in a wide variety of new and improved products.

A new standard for passenger car motor oils was introduced in March 1988 requiring significant upgrading of oils. This new standard, American Petroleum Institute (API) Service Category SG, was the result of the need for higher performance oils in a new generation of car and truck engines. Many new engines are smaller, electronically controlled and feature fuel injection and turbochargers.

Automobile manufacturers are offering extended warranties on engines and transmissions, and high quality lubricants are important in maintaining operating efficiency over the life of the vehicle. Originally, the new SG standard was optional for some U.S. vehicles, but in 1990 it is required by all U.S. auto manufacturers.



*Additional diesel fuel and lubricant research tools include these honeycomb diesel particulate filters, next generation piston rings and diesel fuel injectors.*

## SPECIALTY CHEMICALS

*Fleets of vehicles, such as New York City taxicabs are used to field test viscosity improvers in motor oils and other fuel and lubricant additives. In the laboratory, researchers measure results on nuclear magnetic resonance spectrometer print-outs, and carry out thermal analysis testing with aluminum, gold and copper test parts.*

Motor oil standards in Europe have historically been higher than in the U.S., and many European car makers have their own exacting standards. Lubrizol continues to work with auto manufacturers in developing and testing additives to fit their needs. Significant investment in new product development is made at the company's Hazelwood, England, technical center in this effort. Oil companies and lubricant blenders depend on Lubrizol's additives to give their base oils the characteristics that enable them to meet all vehicle manufacturers' requirements.

LPCC also cooperates with vehicle producers in developing automatic transmission fluids (ATF) for cars and trucks. General Motors, Ford, Daimler-Benz and Allison each have their own specifications for automatic transmission fluids, and Lubrizol technology has enabled them to obtain superior fluids designed for their vehicles. In addition, the company's multifunctional universal ATF system, designated the Lubrizol 7900 Series, is used widely throughout the world.

One important new additive product introduced in 1989 is a high quality viscosity improver. A viscosity improver enables oils to be formulated into multigrade lubricants. An example is SAE 10W-40 grade which acts as a 10 weight oil when cold, as at start-up, and a 40 weight oil when the engine reaches operating tempera-





tures. Lubrizol's new product offers excellent performance at the 40-degrees below zero temperature of Anchorage, Alaska, and performs equally as well in the 110 degrees of Needles, California. It is designed for use in the multigrade oils required by today's high performance engines and achieves excellent performance ratings under constant stop-and-go driving conditions, such as those experienced by taxis. Lubrizol employs fleets of taxicabs to test the effectiveness of its additives under these difficult conditions.

While Lubrizol has offered a series of viscosity improvers for many years, this new additive is a superior product that increases a customer's ability to upgrade lubricants and attain important product differentiation in the marketplace. Lubrizol is widely recognized as a source for a wide variety of additive products used by lubricant producers in their efforts to establish specialized high quality products that serve niche markets. Lubrizol is a partner with customers in developing a competitive advantage through higher quality differentiated lubricant products.

*Productivity Benefiting From Quality Management Programs*

Lubrizol has made large investments in modern production facilities worldwide to serve its growing markets. Application of a quality management process is



enabling these plants to constantly improve their output and performance. In the long term, this increasing efficiency delays the need for new production capacity and promotes a growing sense of cooperation among those charged with improving the efficiency of each plant.

The process is an evolutionary one and begins with the selection and training of individuals who become part of quality teams assigned to solve specific problems. Success within a plant may be a series of small improvements, but their cumulative effect can produce important customer benefits.

One problem approached by a quality management team last year resulted in a significant change in the ordering patterns for a product made at a company plant and shipped to other company plants worldwide.

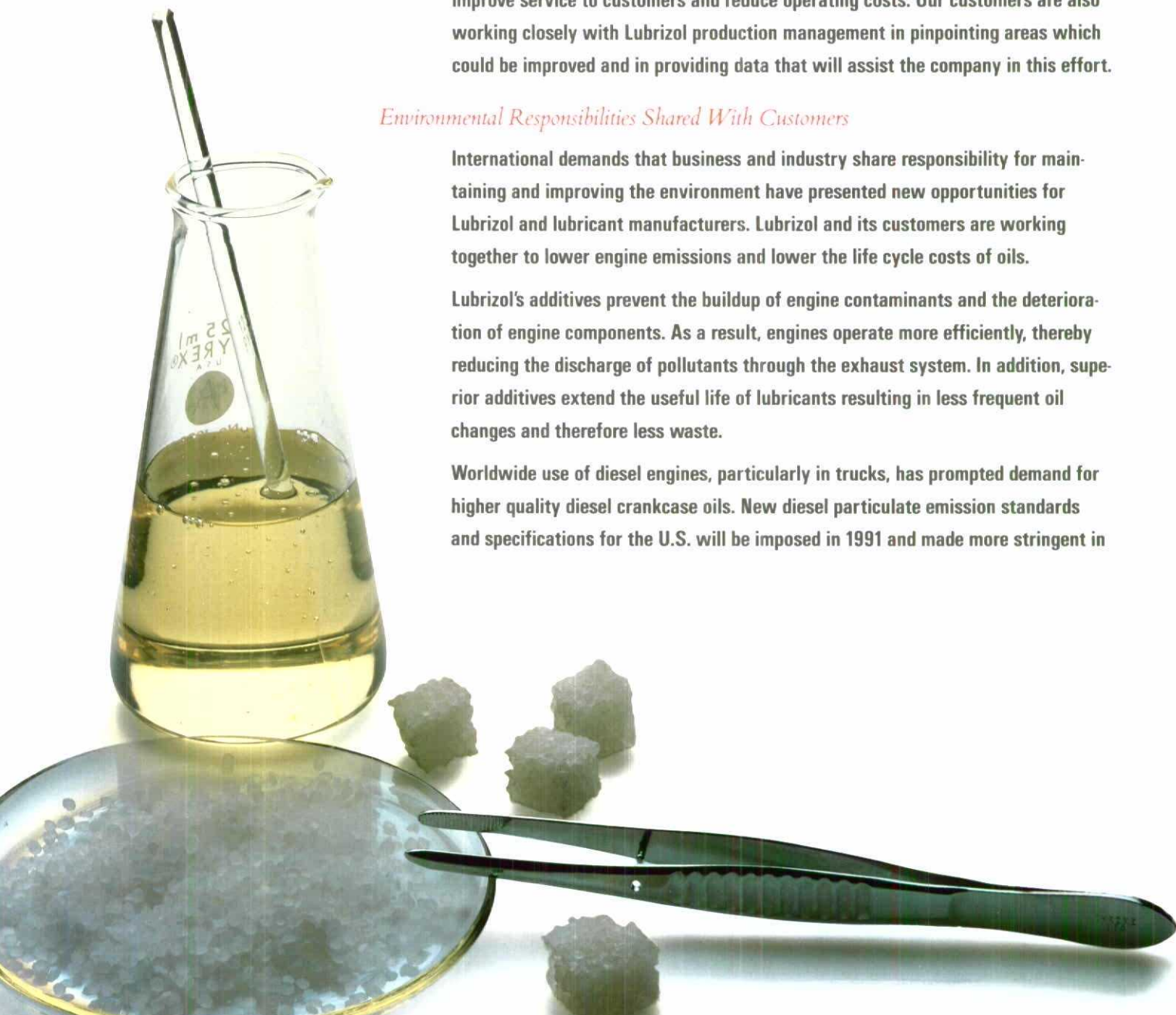
These techniques will be expanded to other facilities to achieve results that will improve service to customers and reduce operating costs. Our customers are also working closely with Lubrizol production management in pinpointing areas which could be improved and in providing data that will assist the company in this effort.

#### *Environmental Responsibilities Shared With Customers*

International demands that business and industry share responsibility for maintaining and improving the environment have presented new opportunities for Lubrizol and lubricant manufacturers. Lubrizol and its customers are working together to lower engine emissions and lower the life cycle costs of oils.

Lubrizol's additives prevent the buildup of engine contaminants and the deterioration of engine components. As a result, engines operate more efficiently, thereby reducing the discharge of pollutants through the exhaust system. In addition, superior additives extend the useful life of lubricants resulting in less frequent oil changes and therefore less waste.

Worldwide use of diesel engines, particularly in trucks, has prompted demand for higher quality diesel crankcase oils. New diesel particulate emission standards and specifications for the U.S. will be imposed in 1991 and made more stringent in





1994. Engine and truck builders are redesigning equipment to meet the new standards, and this will require new additive formulations for heavy duty diesel oils.

### *LUBRIZOL BUSINESS DEVELOPMENT COMPANY*

Lubrizol Business Development Company, created in 1988 to apply Lubrizol technology to meet market demands for a wide variety of specialty chemicals, fuel additives and industrial fluids, is achieving worldwide recognition as a rapidly growing and innovative specialty chemical resource. Its mission is to expand existing business operating groups and to identify and serve new market segments, an effort which has uncovered a broad array of opportunities to generate profitable market-driven businesses.

In addition, Lubrizol Business Development Company is responsible for supporting commercial development and furnishing strategic investment assistance to emerging business units throughout the Corporation. It consists of three operating units, Industrial Products, Fuel Products and New Ventures, supported by a Strategic Planning and Development Division and a Strategic Investment Division.

While the growth of existing businesses is an ongoing goal, it is the formation of new business units which provides the greatest potential for rapid and continuing progress. Business concepts are identified and evaluated through a strategic decision process involving a comprehensive study of desirability and feasibility from the standpoint of commercial and technical development.

The effectiveness of this process relies on the input of data based on factors which reflect broad user needs to satisfy a variety of influences, including performance, cost and environmental considerations.

Once an opportunity is assessed as being desirable, the appropriate business unit devises the plan required to successfully enter the market area. The business unit monitors ongoing progress to assure that each new business pursues a market-driven approach to growth. The Strategic Planning and Development Division provides market research and special management skills to help ensure the success of the program. Investment assistance in structuring new businesses is provided by the Strategic Investment Division.

*Lubrizol's 7340 Series  
Viscosity Improvers are available to customers in these three forms, liquid, pellet and compressed bale.*

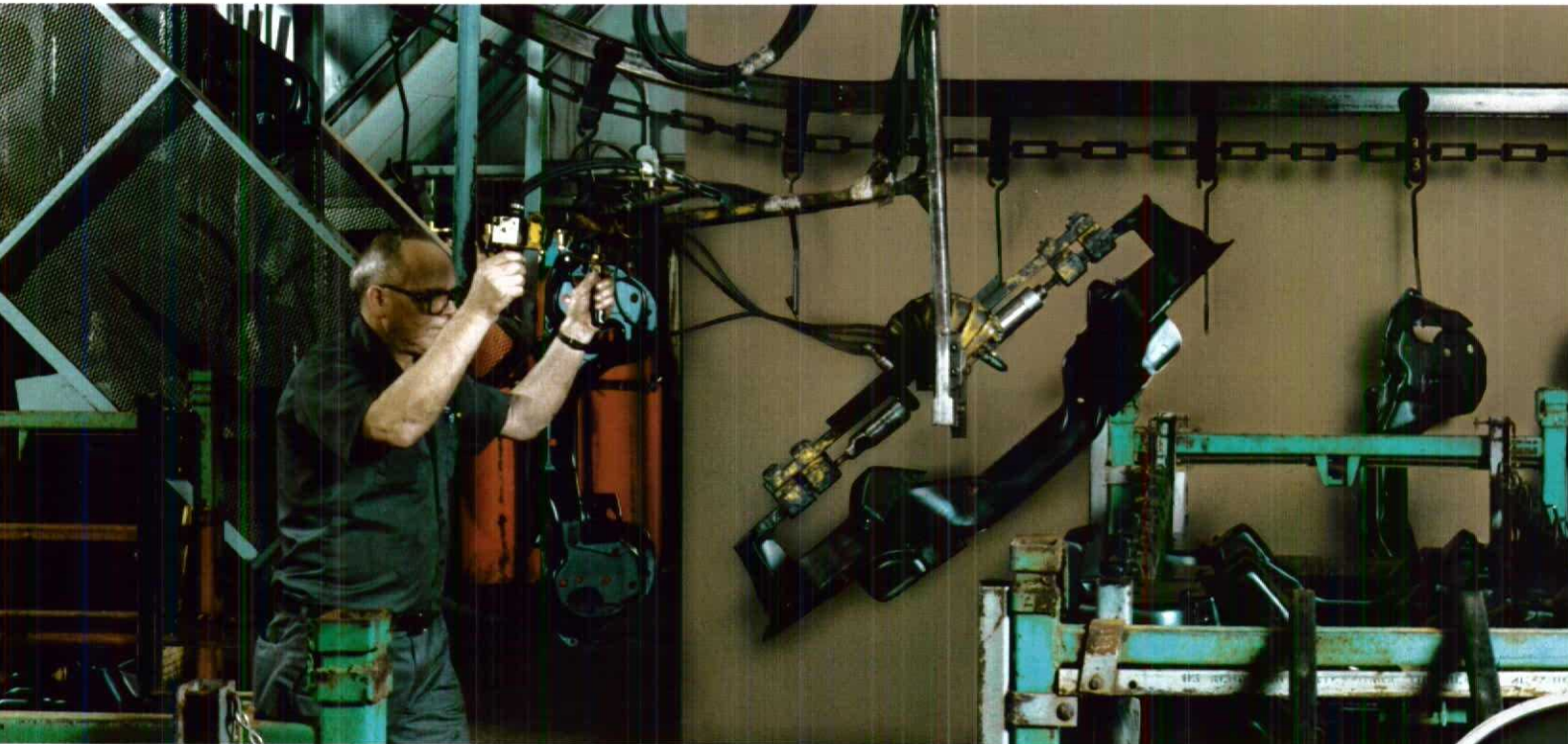
## SPECIALTY CHEMICALS

*Lubrizol produces thermo-plastic protective hot melt coatings used by vehicle manufacturers to protect frame components from corrosion. Coatings in the laboratory can be applied to parts by a spray gun. Samples of the hot melt product in round molds are used in testing, as are stones which are thrown against coated products to measure panel chipping.*

This coordinated market structure method has resulted in the introduction of numerous products for previously untapped markets. More importantly, with the process now fully applied, it is expected that nearly one-half of the future sales of LBDC will be generated from markets developed during the next five years.

Each of LBDC's three operating groups, Industrial Products, Fuel Products and New Ventures, has identified business opportunities that require technology to meet demands for environmentally acceptable specialty chemical-based products. This need is inherent in all specialty chemical product upgrades and new developments, as markets worldwide have moved from a cost/performance criteria to imposing the additional demand for products which are not detrimental to the environment. Lubrizol's technology, developed over more than 60 years of service to the petroleum industry, can be applied to meeting market demand for environmentally safe specialty chemical systems in such diverse areas as fuel additives, metalworking fluids, oil field chemicals, paints and coatings, and industrial hydraulics.

Global opportunities have resulted in a series of organizational changes within Lubrizol Business Development Company which support the implementation of



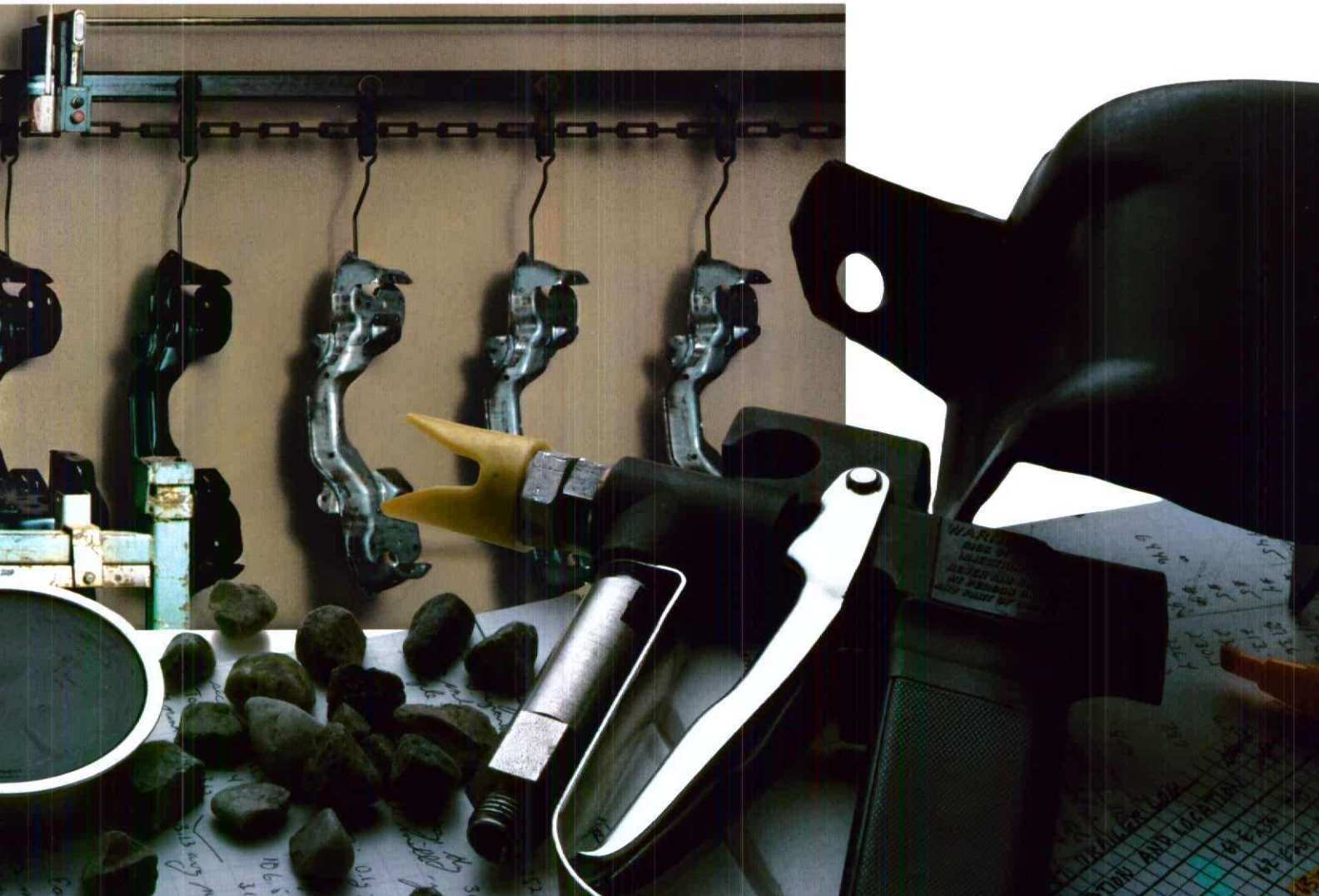


market-driven business strategies. The position of general manager in Europe has been created to give direction to the company's European commercial managers. In addition, the position of director of Asia, Pacific and Latin American operations has been established to manage the company's growth in those areas over the next few years.

### *Fuel Products Aimed At Engine Efficiency For The Long Run*

The issues of fuel quality and environment are impacting the development and marketing of additives for gasoline and diesel-fueled engines and other product areas served by LBDC's Fuel Products group. This group's structure and mission enable it to respond rapidly to market demands for fuel quality and environmentally superior products.

Engine design continues to emphasize smaller, higher output, electronically controlled fuel-injected engines which run on unleaded gasoline. Maintaining efficient operation requires fuels which prevent buildup of deposits on fuel injectors and intake valves. Lubrizol's Triadd® fuel additive system protects injectors and intake valves from deposit buildup, ensuring engine combustion efficiency.



Additives for diesel fuels have been developed in anticipation of new diesel engine design, fuel quality and more stringent Environmental Protection Agency regulations regarding diesel engine emissions in 1991 and 1994. Thorough testing of these additive systems has proven their value in engine performance and control of exhaust emissions.

The demand for environmentally friendly products is being made by the general public, government agencies, labor unions and many other groups. While the United States is at the forefront in pollution control programs, Europe is now moving toward the use of nonleaded fuels to protect the environment. Future exhaust emission standards for gasoline and diesel engines will require a high level of additives, and this offers increasing opportunity for worldwide growth of LBDC's Fuel Products group.

*Industrial Products Focuses On Metalworking Market*

Among the markets assessed by the Lubrizol Business Development Company's Industrial Products Group in 1989 were the metalworking and grease production industries. Each requires additive packages with specific characteristics and offers significant business potential for Lubrizol.

Again, the heightened concern for the environment has played a significant role in shaping market demands. For instance, the metalworking group has developed a new line of products based on environmentally friendly technology. These products, identified as Passive Extreme Pressure<sup>®</sup> agents, provide the user with the same or improved results as the former products.

The metalworking group also is working on the development of semi-synthetic, water-based additives which are stable during use but can be split to remove their organic portion. In effect, this eliminates the need to dispose of large quantities of used oil containing metalworking fluids.





Additives for the grease market extend the lubricant's use for the life of the equipment, eliminating the need for disposal.

Other industrial products, such as Lubrizol's family of high performance hydraulic additives and special purpose fluids, ensure proper lubrication while preventing sludge buildup, controlling acid formation, and minimizing water contamination problems.

### *New Ventures Expand Market Horizons To Additional Profitable Market Niches*

The New Ventures group is responsible for using the company's broad technology base for additional applications in industrial products that are environmentally friendly and provide superior performance.

Units within the New Ventures area are Coating Technologies, Mining Chemicals and Process Chemicals. Each has established a business development plan which measures long-term progress based on meeting market requirements.

These include products for mining such as emulsion explosives with improved safety characteristics, flotation agents which improve recovery of valuable ores, and water-based hydraulic fluids which are effective under many mining environments.

In the coatings area, LBDC has introduced a hot-melt, non-solvent based coating for vehicle frames and axles which protect them from corrosion and enable them to maintain their strength and stability.

Special additives for paints, which control spread and minimize sag, run and drip, are enabling the paint industry to manufacture products with reduced solvent content, an important factor in meeting environmental protection standards.

Another area of interest is the field of Process Chemicals. Examples of this market segment are oil field chemicals, refinery process chemicals and plastic additives. The potential for creating new business units within these markets is being evaluated by a strategic decision process.

*A viscometer probe is used to test hot melt formulations prior to application, and a film thickness gauge is used to inspect the coating after it has been applied to test panels.*

The Agribusiness segment develops, produces and markets crop seeds and specialty vegetable oils created through agricultural research combining traditional plant breeding technology with biotechnology. This segment consists of: Agrigenetics Company, which operates eight North American seed divisions and three overseas affiliated companies; SVO Enterprises, a producer and marketer of a superior sunflower oil and its derivatives; and a strategic agricultural research center.

Lubrizol entered agribusiness with the intention of developing specialty chemicals through agricultural research as an additional method of expanding its technological base. The Agribusiness focus is on the application of agriculture-related technology to the development of commercially successful products or technology.

*The Agrigenetics Company's Madison research facility includes areas where corn and other seeds are planted under carefully controlled conditions allowing the measurement of a wide variety of plants using advanced pathology and biotechnology techniques.*

### *Research Activities Centralized Following Sungene Acquisition*

A major boost was given to the Agribusiness operations during 1989 with the settlement of litigation over the right to various technology, and the acquisition of Sungene Technologies Corporation, San Jose, California. The settlement, with Agrigenetics Research Associates Limited (ARAL), gave Lubrizol the remaining rights to all of the technology developed by the partnership.





Lubrizol became a participant in the partnership through its acquisition in 1985 of Agrigenetics Company, which earlier had established the ARAL partnership to fund research.

Completion of the acquisition of Sungene, in which Lubrizol had an investment for several years, included Sunagra, a joint venture company. Together, Sungene and Sunagra had carried out research under contract to Lubrizol. Following the acquisition, all research operations were transferred to Lubrizol's Madison, Wisconsin, research facility. The 63,000-square-foot facility houses scientists and research professionals.

By consolidating research operations, the company can focus its research effort more effectively and also provide contract research to other companies. The partnership assets include technology which will be developed as commercial products, used in the creation of strategic alliances, sold or licensed. A project team was formed to examine this technology and to maximize its value to Lubrizol.

### *Maximizing Research For Future Commercialization*

The major thrust of the agricultural research programs under way at Madison





*Crop seeds of many types undergo extensive testing to determine progress in achieving desirable genetic changes which improve plant characteristics.*

continues to be the search for new or improved specialty chemicals produced from oil seed crops. High oleic sunflower oil currently being marketed to the food industry is our first successful commercial product from this type of research.

Three other projects being pursued at Madison have their origins either in the ARAL research or in programs conceived at Sungene. We anticipate that these also will result in products with significant commercial potential.

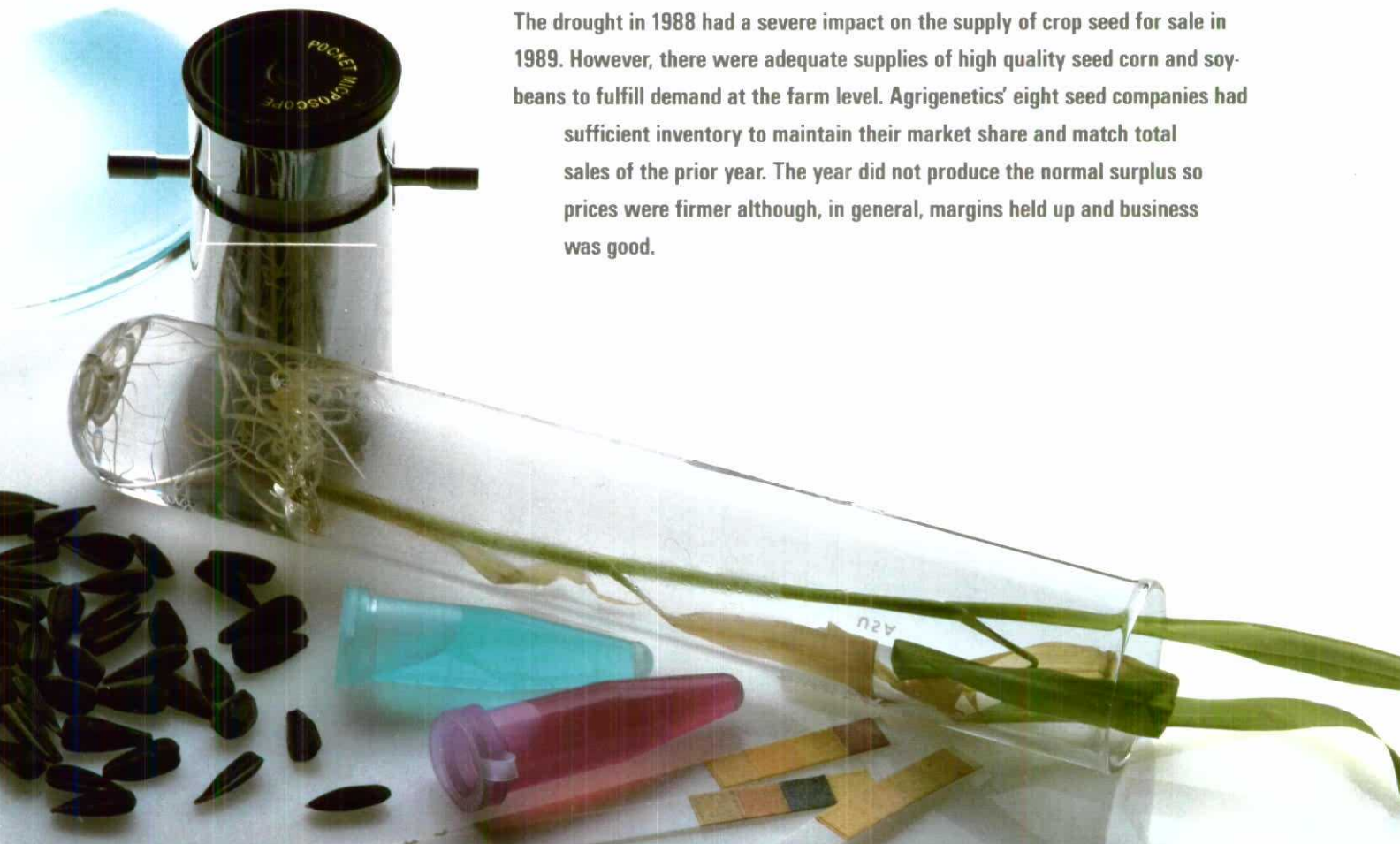
One is a special soybean unit, termed nitrate tolerant soybean, whose nitrogen use characteristics enable it to achieve a significant increase in yield, an attribute that would allow this new mutation to serve as a building block for future increases. Soybeans are a very large crop with some 62 million acres planted in the United States.

A second project includes a patent estate, or series of patents, giving Lubrizol potential control of a gene which will create a quantum increase in insect resistance in crop plants such as corn, cotton and soybeans. These are the seed plants which are of greatest interest to Agrigenetics.

The third project is a novel transformation system that can aid researchers in putting genes into corn that will make the seed more valuable. This technology is a major step in moving genes to make seed more productive and increase yield. It can improve characteristics such as insect and virus resistance.

### *Crop Seed Production Increased For 1990 Season*

The drought in 1988 had a severe impact on the supply of crop seed for sale in 1989. However, there were adequate supplies of high quality seed corn and soybeans to fulfill demand at the farm level. Agrigenetics' eight seed companies had sufficient inventory to maintain their market share and match total sales of the prior year. The year did not produce the normal surplus so prices were firmer although, in general, margins held up and business was good.





To make up for the reduction in inventory, Agrigenetics increased its contract crop seed acreage for the 1989 season in order to have seed available to satisfy customers for the 1990 growing season. For 1990, acreage for corn, soybeans and sorghum will be about the same, but sunflower acreage will be lower. It is anticipated that inventories will be normal for all crops.

A new joint venture in France provides additional market strength in Europe, and the company is expanding in Italy through an affiliate. France and Italy are the two largest seed crop markets in Europe, and Agrigenetics also is serving Germany, Belgium and Spain as it actively seeks to expand throughout Europe.

### *Monounsaturated Sunflower Oil Used In Food Products*

Concern about cholesterol and saturated fats has been a major factor in the acceptance of the company's high oleic sunflower oil by the food industry. The oil, TRISUN<sup>®</sup>, is marketed by SVO Enterprises and was developed by SIGCO Research, both divisions of Agrigenetics. It is a monounsaturated oil pressed from a special hybrid sunflower.

Among the characteristics of TRISUN are its neutral flavor and color and excellent oxidation stability.

The product is used in the food industry as a replacement for palm and coconut oils which are high in the saturated fats thought to be responsible for increasing cholesterol levels.

Used as a spray on cookies, crackers and cereals, TRISUN prevents the penetration of moisture, keeping the products crisp and extending their shelf life. TRISUN also is used in non-dairy creamers, frozen desserts and baby formula. It is an excellent oil for frying due to its low saturated fat content and greater stability.

The output of TRISUN has grown over the past two years, and the company expects that 1990 sales will be up significantly from 1989. While sunflower oil has proven to be an excellent vegetable oil, Agrigenetics is continuing research into other crop seeds that will yield superior oils with similar characteristics but at a lower cost than TRISUN.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Lubrizon is a specialty chemical company using chemical, mechanical and biological technologies to develop products for world markets in transportation, industry and agriculture. The company's business segments are Specialty Chemicals and Agribusiness. The Specialty Chemicals segment develops, produces and sells chemical additives for automotive and industrial lubricants and functional fluids, fuel additives and diversified specialty chemical products. The Agribusiness segment includes the traditional operations which develop, produce and sell planting seeds for agricultural and oilseed crops, and develop and market specialty vegetable oils. Agribusiness also includes strategic activities, which consist of biotechnology research and development directed toward developing new products for the agriculture, food and chemical industries.

Results of Operations

In 1989, consolidated revenues increased \$102 million or 9% compared to 1988 due to increases in both of the company's business segments. Gross profit (Sales less Cost of Sales) increased \$21 million or 6% over 1988. However, as a percentage of sales gross profit decreased to 29% in 1989 from 30% in 1988 and 1987. The increased gross profit in 1989 was substantially offset by increased selling and administrative expenses in both segments and higher research and development expenses in the Specialty Chemicals segment. As a result, total revenues increased \$2.4 million or 2% more than total cost and expenses.

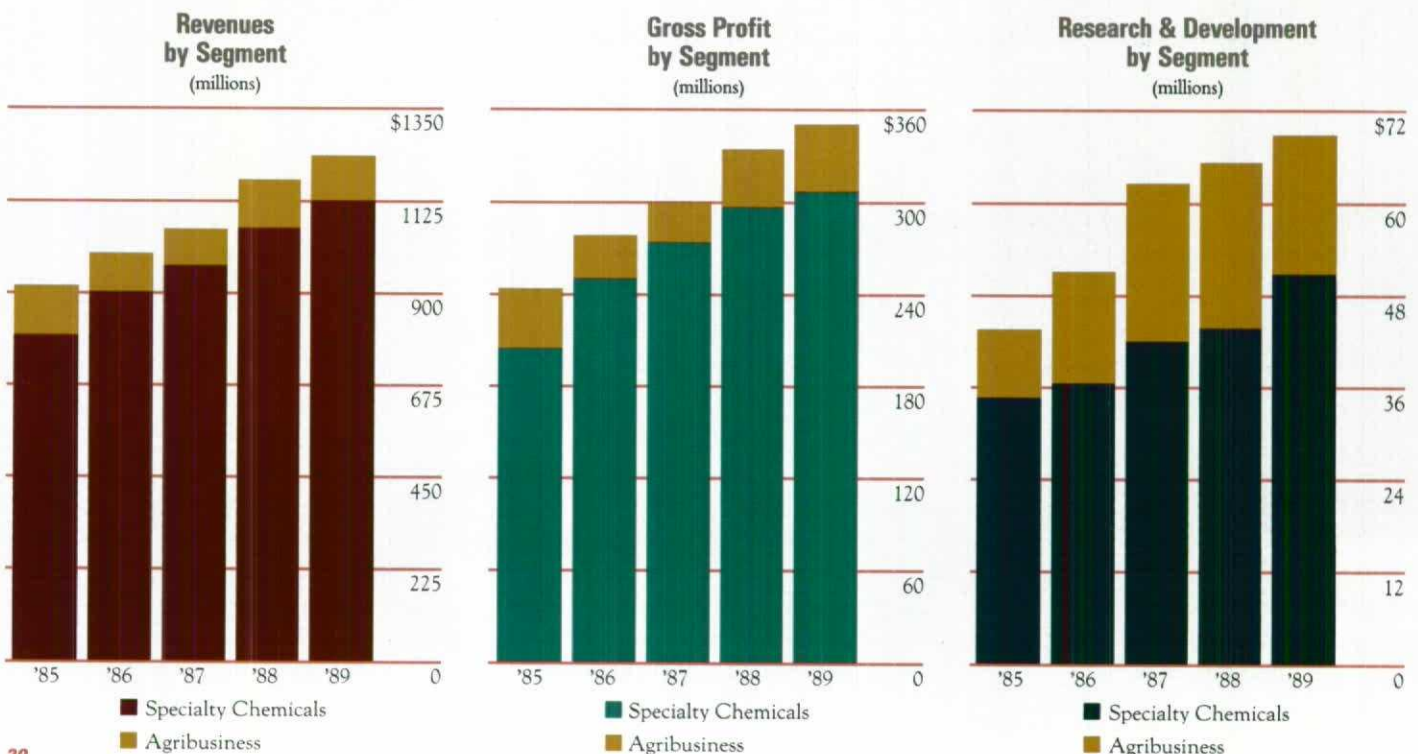
Other income decreased \$9.0 million primarily due to lower net investment gains in 1989. Net investment gains consist of gain

on sale of investments and a loss recorded on a write-down of a marketable equity security. Net interest income increased \$8.6 million primarily from interest recorded on income tax refunds to be received from the Internal Revenue Service.

In 1989, net income decreased \$46.0 million to \$94.0 million or \$2.52 per share. Net income for 1989 was less due to the patent litigation settlement, special charges and accounting change that were recorded in 1988. Excluding these 1988 factors and the change in net investment gains, net income increased \$5.3 million in 1989.

In 1988, consolidated revenues increased \$103 million or 10% compared to 1987 primarily due to a \$96 million increase in revenues of Specialty Chemicals. Gross profit increased 11% and remained constant with 1987 at 30% of sales. The increased gross profit was partially offset by higher selling, testing and administrative expenses and increased research and development expenses in both segments. As a result, total revenues increased by \$10 million more than total cost and expenses.

In 1988, a significant patent litigation settlement from Exxon Corporation, after deducting related expenses and income taxes, added \$53.2 million (\$1.37 per share) to net income. Income in 1988 was reduced by special charges of \$31.2 million (\$17.1 million after tax or \$.44 per share) for write-downs of several investments in the venture development area and the discontinuance of certain agricultural biotechnology research programs. In 1987, write-downs in the Agribusiness segment were \$10.2 million (\$6.4 million after tax or \$.17 per share). Gain on sale of





investments was \$10.2 million (\$7.0 million after tax or \$.18 per share) in 1988, compared to \$21.2 million (\$14.0 million after tax or \$.35 per share) in 1987. Net income in 1988 also was increased \$8.8 million (\$.22 per share) due to the cumulative effect of adopting Statement of Financial Accounting Standards No. 96, Accounting for Income taxes, effective January 1, 1988.

Net income in 1988 increased \$58.6 million to \$139.9 million or \$3.62 per share. The improved net income resulted from the increase in revenues over cost and expenses, from the items discussed in the preceding paragraph and from lower statutory income tax rates.

In 1987, consolidated revenues increased \$37 million or 4% due to a \$50 million increase in Specialty Chemicals revenues, offset by a \$13 million decline in Agribusiness revenues. Improved gross profit was offset by increased selling, testing and administrative expenses and higher research and development expenses in both segments. As a result, cost and expenses increased slightly more than revenues. Net income increased 4% to \$81.3 million or \$2.06 per share.

**Return on average shareholders' equity**, including unusual items, was 14% in 1989, 22% in 1988 and 14% in 1987.

#### Specialty Chemicals Segment

In 1989, Specialty Chemicals revenues, which accounted for 92% of consolidated revenues, increased 8%. Volume increased 7% in 1989, nearly all of which occurred in the first half of the year. Both domestic and international markets contributed to

the increase in volume. Price increases were substantially offset by unfavorable currency effects.

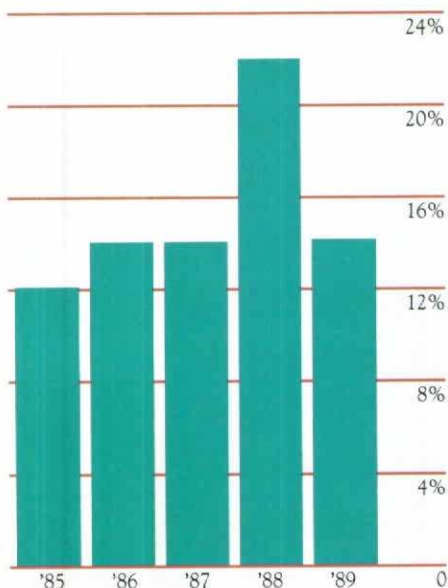
The level of customer orders was lower in the second half of 1989 than in the first half and shipments declined 4% in the fourth quarter compared to the fourth quarter of 1988. Management believes that the company maintained market share and that this decline is not indicative of a downward trend.

Gross profit increased 5% or \$14.5 million while revenues increased 8%. In 1989, the gross profit percentage declined to 29% from 30% in 1988. Raw material costs increased during the first half of 1989 and remained high for the year. Manufacturing costs also increased during the year. The company was unable to implement selling price increases early enough in the year to maintain margins due to the strong competition throughout the company's worldwide markets. Gross profit was also negatively affected by the stronger U.S. dollar in 1989 compared to 1988.

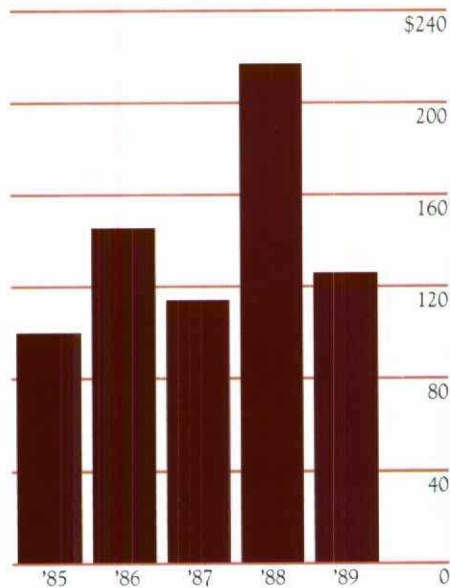
Selling and administrative expenses increased 8% in 1989 because of efforts to create new business units and markets, increased employee-related costs and a \$1 million donation to The Lubrizol Foundation. Research and development expenses increased 19% due to increased new product development and foreign patent application activity.

Specialty Chemicals segment income in 1989 was \$141.2 million, which is \$82.1 million lower than 1988. After adjusting for the patent litigation settlement and special charges in 1988 and

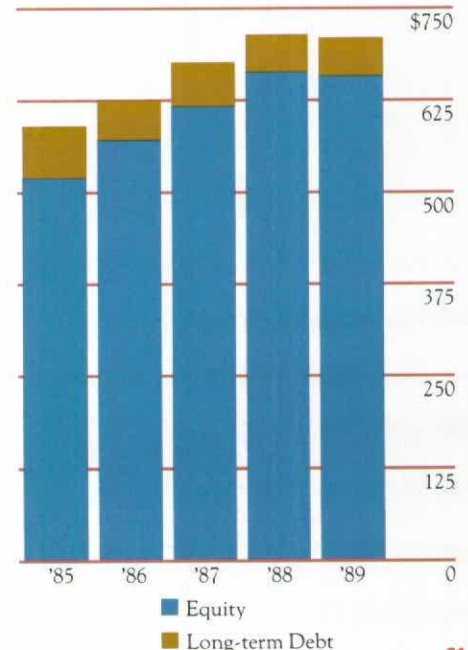
**Return on Equity**  
(percent)



**Cash Provided from Operating Activities**  
(millions)



**Capitalization**  
(millions)





the lower net investment gains in 1989, segment income decreased \$5.8 million in 1989.

**In 1988**, Specialty Chemicals segment revenues increased 10%. This increase resulted primarily from a 7% improvement in volume and the effect of translating stronger foreign currencies into U.S. dollars. Both domestic and international markets contributed to the increase in volume. The gross profit percentage was stable at 30%. Selling, testing and administrative expenses increased 14% because of increased customer testing to meet the new SG motor oil specification and other new product development requirements. Research and development expenses increased 6%. These factors, together with higher equity earnings from non-consolidated companies, increased segment income by \$12.1 million in 1988. The patent litigation settlement added \$81.2 million, gain on sale of investments was

\$11.0 million lower than in 1987, and special charges for write-downs of investments in several venture development companies reduced segment income by \$14.1 million. The net result was an increase of \$68.2 million in segment income to \$223.4 million for 1988.

**In 1987**, Specialty Chemicals revenues increased 6% because of a 4% increase in volume and the effect of translating stronger foreign currencies into U.S. dollars. Higher margin after material costs during the first half of 1987 was partially offset by higher manufacturing expenses, resulting in an increase in gross profit percentage of 1% to 30%. Selling, testing and administrative expenses increased 15% because of increased sales and market development activities, overseas testing, and administrative support including legal expenses and computer system enhancements. Research and development expenses increased

### Operating Results By Business Segment

(In Thousands of Dollars)

|   | 1989               | 1988               | 1987               |
|---|--------------------|--------------------|--------------------|
| <b>Revenues:</b>                          |                    |                    |                    |
| Specialty Chemicals .....                 | \$1,124,364        | \$1,035,858        | \$ 939,766         |
| Agribusiness .....                        | 103,546            | 89,873             | 82,511             |
| Total .....                               | <u>\$1,227,910</u> | <u>\$1,125,731</u> | <u>\$1,022,277</u> |
| <b>Gross Profit:</b>                      |                    |                    |                    |
| Specialty Chemicals .....                 | \$ 320,785         | \$ 306,241         | \$ 276,138         |
| Agribusiness .....                        | 35,025             | 28,139             | 24,140             |
| Total .....                               | <u>\$ 355,810</u>  | <u>\$ 334,380</u>  | <u>\$ 300,278</u>  |
| <b>Research and development expenses:</b> |                    |                    |                    |
| Specialty Chemicals .....                 | \$ 51,342          | \$ 43,144          | \$ 40,628          |
| Agribusiness – Traditional .....          | 6,441              | 4,874              | 4,033              |
| – Strategic .....                         | 11,875             | 17,302             | 16,877             |
| Total .....                               | <u>18,316</u>      | <u>22,176</u>      | <u>20,910</u>      |
| Total .....                               | <u>\$ 69,658</u>   | <u>\$ 65,320</u>   | <u>\$ 61,538</u>   |
| <b>Segment income (loss):</b>             |                    |                    |                    |
| Specialty Chemicals .....                 | \$ 141,248         | \$ 223,389         | \$ 155,182         |
| Agribusiness – Traditional .....          | 1,802              | (2,394)            | (4,275)            |
| – Strategic .....                         | (16,519)           | (37,840)           | (24,670)           |
| Total .....                               | <u>(14,717)</u>    | <u>(40,234)</u>    | <u>(28,945)</u>    |
| Total .....                               | <u>\$ 126,531</u>  | <u>\$ 183,155</u>  | <u>\$ 126,237</u>  |
| <b>Identifiable assets:</b>               |                    |                    |                    |
| Specialty Chemicals .....                 | \$ 732,784         | \$ 730,456         | \$ 699,894         |
| Agribusiness .....                        | 139,253            | 124,702            | 152,021            |
| Corporate short-term investments .....    | 88,147             | 115,513            | 87,463             |
| Total .....                               | <u>\$ 960,184</u>  | <u>\$ 970,671</u>  | <u>\$ 939,378</u>  |



11%. As a result of these factors and a \$5.6 million increase in the gain on sale of investments, Specialty Chemicals segment income in 1987 increased \$5.7 million or 4% compared to 1986.

#### **Agribusiness Segment**

**In 1989**, Agribusiness revenues increased 15% to \$104 million. Higher selling prices for planting seeds increased revenues by 12% and the remaining increase was due to favorable product mix in specialty vegetable oils. Gross profit increased 24% to \$35 million. Agribusiness gross profit percentage increased to 34% in 1989 from 31% in 1988 as a result of the higher selling prices, offset in part by higher seed costs, both of which resulted from the 1988 drought. As the 1989 harvest was not affected by drought, the company's unit cost of seed will decrease in 1990 and management believes that the gross profit percentage will be maintained.

Higher selling expenses and traditional research expenses partially offset the increased gross profit in 1989. As a result, segment income from traditional operations was \$1.8 million, an improvement of \$4.2 million over 1988.

In 1989, the company paid \$16 million for the remaining rights to plant science technology developed by Agrigenetics Research Associates Limited and to secure the release of all claims under a related class action suit. The company also acquired the remaining shares of Sungene Technologies Corporation, a significant provider of strategic contract research.

Agribusiness strategic research and development expenses decreased 31% to \$11.9 million in 1989 due to the discontinuance of certain research programs and cost efficiencies obtained because of the Sungene acquisition. In 1989, the loss from strategic Agribusiness activities was \$16.5 million, or \$21.3 million less than in 1988. Included in 1988 was \$17.1 million of special charges discussed below.

**In 1988**, Agribusiness revenues increased 9% to \$90 million due to increased sales volume of specialty vegetable oils. The gross profit in 1988 increased primarily due to the vegetable oil inventory write-down in 1987. Gross profit as a percentage of sales increased 2% to 31%. Higher marketing and research expenses partially offset the increase in gross profit. As a result, the \$2.4 million segment loss from traditional operations was \$1.9 million less than in 1987.

In 1988, strategic Agribusiness activities contributed \$37.8 million to the Agribusiness segment loss. These activities included strategic research expenses of \$17.3 million and special charges of \$17.1 million. The special charges were for the discontinuance of certain biotechnology research programs at Agrigenetics Advanced Science Company on August 31, 1988, and the write-down of an investment.

**In 1987**, Agribusiness revenues decreased 14% because of lower volume resulting from reduced acreage planted by farmers under the U.S. Government farm program and a loss of

revenues resulting from the sale of the Sunseeds division in 1986. Gross profit in 1987 was reduced by \$3.0 million for the write-down of vegetable oil inventory to estimated market value. The \$4.3 million loss from traditional operations was \$6.3 million less than in 1986 because of reduced marketing, administrative and research expenses and an unusual charge recorded in 1986.

The loss from strategic activities in 1987 increased \$14.3 million over 1986 because of higher research expenses due to additional programs and special charges of \$7.2 million for a write-off of intangible program assets.

#### **Working Capital, Liquidity and Capital Resources**

The company's cash flows for the years 1987 through 1989 are presented in the consolidated statement of cash flows. Cash provided from operating activities during 1989 was \$125 million, a decrease of \$87 million compared to 1988. The decrease was due to the cash received in November 1988 from the patent litigation settlement, and higher income tax payments and lower proceeds received from the sale of investments in 1989. The company continued its common share repurchase program by acquiring 1.1 million shares for \$40.3 million in 1989. This along with dividend payments, capital expenditures and acquisition of plant science technology, resulted in a \$42.6 million decrease in cash and short-term investments. During 1989, the working capital needs were financed by internally generated funds and the company's strong cash position at the beginning of the year.

The company's financial position continues to be strong. At the end of 1989 and 1988, the ratio of current assets to current liabilities was 3 to 1. Long-term debt as a percent of total capitalization (shareholders' equity plus long-term debt) was 7.5% at the end of 1989 and 1988.

The company owns approximately 6 million common shares of Genentech, Inc. On February 2, 1990, Genentech announced an agreement with Roche Holding Ltd. whereby the shareholders of Genentech would receive \$36 per share in cash for half of their shares. The Genentech announcement disclosed that this agreement is subject to the approval of its shareholders.

At December 31, 1989, the company had unused revolving credit agreements and other credit lines aggregating \$70 million. Subsequently, the company revised the amount of these credit facilities to \$55 million. The company believes its credit facilities and internally generated funds will be sufficient to meet its capital needs during 1990. The company also believes it has the financial strength to obtain additional credit facilities and other financing as needed.

Capital expenditures, primarily to provide manufacturing, administrative and technical support to Specialty Chemicals, are anticipated to approximate \$80 million in 1990. At December 31, 1989, there was outstanding Board authorization for the company to repurchase approximately 1.7 million of its shares.



**Consolidated Statements of Income**

| <i>(In Thousands of Dollars Except Per Share Data)</i>           | Year Ended December 31 |             |             |
|--|------------------------|-------------|-------------|
|  | 1989                   | 1988        | 1987        |
| Net sales .....  | \$1,220,386            | \$1,117,493 | \$1,013,430 |
| Royalties and other revenues .....                               | 7,524                  | 8,238       | 8,847       |
| Total revenues .....   | 1,227,910              | 1,125,731   | 1,022,277   |
| Cost of sales .....  | 864,576                | 783,113     | 713,152     |
| Selling, testing and administrative expenses .....               | 175,474                | 161,456     | 141,698     |
| Research and development expenses .....                          | 69,658                 | 65,320      | 61,538      |
| Total cost and expenses .....                                    | 1,109,708              | 1,009,889   | 916,388     |
| Patent litigation settlement .....                               |                        | 81,180      |             |
| Special charges .....  |                        | (31,154)    | (7,192)     |
| Other income — net .....   | 8,329                  | 17,287      | 27,540      |
| Interest income .....  | 16,653                 | 8,798       | 9,235       |
| Interest expense .....   | (5,438)                | (6,203)     | (6,273)     |
| Income before income taxes and accounting change .....           | 137,746                | 185,750     | 129,199     |
| Provision for income taxes .....                                 | 43,766                 | 54,544      | 47,864      |
| Income before cumulative effect of accounting change .....       | 93,980                 | 131,206     | 81,335      |
| Cumulative effect of change in accounting for income taxes ..... |                        | 8,751       |             |
| Net income .....   | \$ 93,980              | \$ 139,957  | \$ 81,335   |
| Net income per share:  |                        |             |             |
| Before accounting change .....                                   | \$2.52                 | \$3.40      | \$2.06      |
| Cumulative effect of accounting change .....                     |                        | .22         |             |
| Net income .....   | \$2.52                 | \$3.62      | \$2.06      |

*The accompanying notes to financial statements are an integral part of these statements.*



**Consolidated Balance Sheets**

| (In Thousands of Dollars)  | December 31      |                  |
|--|------------------|------------------|
|  | 1989             | 1988             |
| <b>Assets</b>  |                  |                  |
| Cash and short-term investments .....  | \$ 81,641        | \$124,236        |
| Receivables .....  | 191,964          | 206,859          |
| Inventories .....  | 251,796          | 224,764          |
| Other .....  | 17,765           | 17,143           |
| Total current assets .....   | <u>543,166</u>   | <u>573,002</u>   |
| Property and equipment-at cost .....   | 810,706          | 731,252          |
| Less accumulated depreciation .....  | 494,213          | 432,582          |
| Property – net .....   | <u>316,493</u>   | <u>298,670</u>   |
| Investments in non-consolidated companies .....  | 51,966           | 73,212           |
| Intangible and other assets .....  | 48,559           | 25,787           |
| TOTAL .....  | <u>\$960,184</u> | <u>\$970,671</u> |
| <b>Liabilities and Shareholders' Equity</b>  |                  |                  |
| Short-term debt .....  | \$ 8,002         | \$ 5,483         |
| Accounts payable .....   | 98,413           | 105,199          |
| Income taxes and other current liabilities .....   | 74,493           | 74,206           |
| Total current liabilities .....  | <u>180,908</u>   | <u>184,888</u>   |
| Long-term debt .....   | 53,180           | 55,339           |
| Non-current liabilities .....  | 29,320           | 26,851           |
| Deferred income taxes .....  | 33,512           | 39,285           |
| Total liabilities .....  | <u>296,920</u>   | <u>306,363</u>   |
| Common shares without par value – Outstanding 37,008,108 shares in 1989<br>and 38,009,911 shares in 1988 ..... | 78,221           | 77,260           |
| Retained earnings .....  | 601,612          | 597,124          |
| Accumulated translation adjustment .....   | (16,569)         | (10,076)         |
| Total shareholders' equity .....   | <u>663,264</u>   | <u>664,308</u>   |
| TOTAL .....  | <u>\$960,184</u> | <u>\$970,671</u> |

The accompanying notes to financial statements are an integral part of these statements.

**Consolidated Statements of Cash Flows**

| <i>(In Thousands of Dollars)</i>                           | Year Ended December 31  |                          |                         |
|--|-------------------------|--------------------------|-------------------------|
|  | 1989                    | 1988                     | 1987                    |
| <b>Cash provided from (used for):</b>                      |                         |                          |                         |
| <b>Operating activities:</b>                               |                         |                          |                         |
| Received from customers                                    | \$1,220,978             | \$1,109,333              | \$1,008,750             |
| Paid to suppliers and employees                            | (1,066,449)             | (957,945)                | (866,274)               |
| Received from patent litigation settlement                 |                         | 80,000                   |                         |
| Income taxes paid  | (51,528)                | (44,566)                 | (58,372)                |
| Received from the sale of investments                      | 7,161                   | 16,529                   | 22,043                  |
| Interest and dividends received                            | 15,736                  | 11,640                   | 10,293                  |
| Interest paid  | (6,193)                 | (5,447)                  | (7,087)                 |
| Other – net  | 5,200                   | 2,238                    | 4,440                   |
| Total operating activities                                 | <u>124,905</u>          | <u>211,782</u>           | <u>113,793</u>          |
| <b>Investing activities:</b>                               |                         |                          |                         |
| Capital expenditures                                       | (64,721)                | (54,611)                 | (42,040)                |
| Investments in non-consolidated companies                  | (1,723)                 | (6,526)                  | (14,420)                |
| Acquisition of plant science technology                    | (16,276)                |                          |                         |
| Acquisition of subsidiary                                  |                         | (10,754)                 |                         |
| Other – net  | 2,691                   | 57                       | 1,411                   |
| Total investing activities                                 | <u>(80,029)</u>         | <u>(71,834)</u>          | <u>(55,049)</u>         |
| <b>Financing activities:</b>                               |                         |                          |                         |
| Short-term borrowings (repayment)                          | 1,925                   | (7,682)                  | 8,191                   |
| Long-term debt repayment                                   | (195)                   | (238)                    | (241)                   |
| Dividends paid   | (51,509)                | (62,998)                 | (47,631)                |
| Common shares purchased, net of options exercised          | (37,022)                | (33,609)                 | (20,580)                |
| Total financing activities                                 | <u>(86,801)</u>         | <u>(104,527)</u>         | <u>(60,261)</u>         |
| Effect of exchange rate changes on cash                    | (670)                   | (3,932)                  | 8,621                   |
| Net increase (decrease) in cash and short-term investments | (42,595)                | 31,489                   | 7,104                   |
| Cash and short-term investments at the beginning of year   | 124,236                 | 92,747                   | 85,643                  |
| <b>Cash and short-term investments at the end of year</b>  | <u><u>\$ 81,641</u></u> | <u><u>\$ 124,236</u></u> | <u><u>\$ 92,747</u></u> |

*The accompanying notes to financial statements are an integral part of these statements.*



## Consolidated Statements of Shareholders' Equity

|  | Number of<br>Shares<br>Outstanding | Shareholders' Equity |                      |  |
|--|------------------------------------|----------------------|----------------------|--|
|  |                                    | Common<br>Shares     | Retained<br>Earnings | Accumulated<br>Translation<br>Adjustment |
| <i>(In Thousands of Dollars)</i>                   |                                    |                      |                      |  |
| <b>Balance, December 31, 1986</b> .....            | 39,690,808                         | \$76,476             | \$529,428            | \$(33,225)                               |
| Net income for 1987 .....                          |                                    |                      | 81,335               |  |
| Cash dividends (\$1.22 per share) .....            |                                    |                      | (48,202)             |  |
| Translation adjustment for 1987 .....              |                                    |                      |                      | 36,401                                   |
| Common shares – Treasury:                          |                                    |                      |                      |  |
| Shares purchased .....                             | (777,832)                          | (637)                | (21,246)             |  |
| Shares issued upon exercise of stock options ..... | <u>47,846</u>                      | <u>1,303</u>         |                      |  |
| <b>Balance, December 31, 1987</b> .....            | 38,960,822                         | 77,142               | 541,315              | 3,176                                    |
| Net income for 1988 .....                          |                                    |                      | 139,957              |  |
| Cash dividends (\$1.30 per share) .....            |                                    |                      | (50,422)             |  |
| Translation adjustment for 1988 .....              |                                    |                      |                      | (13,252)                                 |
| Common shares – Treasury:                          |                                    |                      |                      |  |
| Shares purchased .....                             | (1,014,760)                        | (1,574)              | (33,726)             |  |
| Shares issued upon exercise of stock options ..... | <u>63,849</u>                      | <u>1,692</u>         |                      |  |
| <b>Balance, December 31, 1988</b> .....            | 38,009,911                         | 77,260               | 597,124              | (10,076)                                 |
| Net income for 1989 .....                          |                                    |                      | 93,980               |  |
| Cash dividends (\$1.38 per share) .....            |                                    |                      | (51,509)             |  |
| Translation adjustment for 1989 .....              |                                    |                      |                      | (6,493)                                  |
| Common shares – Treasury:                          |                                    |                      |                      |  |
| Shares purchased .....                             | (1,121,245)                        | (2,310)              | (37,983)             |  |
| Shares issued upon exercise of stock options ..... | <u>119,442</u>                     | <u>3,271</u>         |                      |  |
| <b>Balance, December 31, 1989</b> .....            | <u>37,008,108</u>                  | <u>\$ 78,221</u>     | <u>\$ 601,612</u>    | <u>\$ (16,569)</u>                       |

The accompanying notes to financial statements are an integral part of these statements.

## NOTES TO FINANCIAL STATEMENTS

(In Thousands of Dollars Unless Otherwise Indicated)

### Note 1 — Accounting Policies

**CONSOLIDATION** — The consolidated financial statements include the accounts of The Lubrizol Corporation and its subsidiaries. For non-consolidated companies (affiliates), the equity method of accounting is used when ownership exceeds 20% and the company has the ability to exercise significant influence over the policies of the investee. Other affiliates are carried at cost.

**INVENTORIES** — Inventories are stated at cost which is not in excess of market. Cost of Specialty Chemicals segment inventories is determined by the last-in, first-out (LIFO) method in the United States and the first-in, first-out (FIFO) method elsewhere. Agribusiness inventory cost is determined by the average cost method.

**DEPRECIATION AND AMORTIZATION** — Accelerated depreciation methods are used in computing depreciation on approximately 70% of the depreciable assets. The remaining assets are depreciated using the straight-line method. Amortization of intangible and other assets is on a straight-line method over periods ranging from 5 to 20 years. For income tax purposes, different methods and rates are used in certain instances. Deferred income taxes relating to temporary differences have been provided.

**FOREIGN CURRENCY TRANSLATION** — The assets and liabilities of most non-U.S. subsidiaries are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Operating results are translated at weighted average exchange rates in effect during the period. Net unrealized translation adjustments are recorded as a separate component of shareholders' equity.

**PER SHARE AMOUNTS** — Net income per share has been computed by dividing net income by the average number of common shares outstanding during the year. Net income per share has not been adjusted for the effect of stock options as the dilution effect would be less than 2% in any year.

### Note 2 — Inventories

|                                  | 1989             | 1988             |
|----------------------------------|------------------|------------------|
| Finished products .....          | \$100,497        | \$100,032        |
| Products in process .....        | 72,367           | 64,022           |
| Raw materials and supplies ..... | 78,932           | 60,710           |
|                                  | <u>\$251,796</u> | <u>\$224,764</u> |

Inventories on the LIFO method at December 31, 1989 and 1988 were 19% and 23% of consolidated inventories. The current replacement cost of these inventories exceeded the LIFO cost at December 31, 1989 and 1988 by \$37.5 million and \$32.3 million. At December 31, 1989 and 1988, inventories of the

Specialty Chemicals segment were \$189.9 million and \$163.4 million, and Agribusiness inventories were \$61.9 million and \$61.4 million.

### Note 3 — Investments in Non-consolidated Companies

|                                     | 1989            | 1988            |
|-------------------------------------|-----------------|-----------------|
| Investments carried at equity ..... | \$39,569        | \$55,239        |
| Investments carried at cost .....   | 12,397          | 17,973          |
|                                     | <u>\$51,966</u> | <u>\$73,212</u> |

Investments carried at equity exceeded the company's equity in the underlying book values by \$14.1 million and \$17.5 million at December 31, 1989 and 1988. The excess is being amortized over periods not exceeding 20 years. Accumulated amortization of goodwill on investments carried at equity was \$8.2 million and \$5.8 million at December 31, 1989 and 1988.

Investments include marketable equity securities of \$15.6 million in 1989 and \$21.7 million in 1988. The market value of these securities exceeded the cost by \$129 million and \$90 million at December 31, 1989 and 1988.

The company holds approximately 6 million common shares of Genentech, Inc. On February 2, 1990, Genentech announced an agreement with Roche Holding Ltd. whereby the shareholders of Genentech would receive \$36 per share in cash for half of their shares. The Genentech announcement disclosed that this agreement is subject to the approval of its shareholders.

In December 1989, Industria de Aditivos do Brasil S.A. (IAB), previously a 50% owned equity investee, became a wholly owned subsidiary when IAB redeemed the stock of the other shareholder. The effect of consolidating IAB in the 1989 financial statements was not significant.

### Note 4 — Short-Term and Long-Term Debt

Short-term debt of \$8.0 million and \$5.5 million at December 31, 1989 and 1988 consisted of short-term bank loans.

Long-term debt consists of:

|   | 1989            | 1988            |
|---|-----------------|-----------------|
| 7.875% Marine terminal / Industrial development revenue bonds, due 2000 ..... | \$19,375        | \$19,375        |
| Term Loans  |                 |                 |
| 7.99% due 1992 .....  | 20,000          | 20,000          |
| 5.8% yen denominated, due 1993 .....  | 13,194          | 15,200          |
| Other (various rates) .....   | 611             | 764             |
|   | <u>\$53,180</u> | <u>\$55,339</u> |

The company has available \$55 million under revolving credit agreements and other credit lines. These facilities, which were substantially unused during 1989, would permit the company to borrow at or below the U.S. prime rate.



### Note 5 – Other Balance Sheet Information

#### Receivables:

|                  | 1989             | 1988             |
|------------------|------------------|------------------|
| Customers .....  | \$168,978        | \$170,614        |
| Affiliates ..... | 8,912            | 19,370           |
| Other .....      | 14,074           | 16,875           |
|                  | <u>\$191,964</u> | <u>\$206,859</u> |

Receivables are net of allowance for doubtful accounts of \$1.7 million in 1989 and \$1.5 million in 1988.

#### Property and Equipment:

|                                  | 1989             | 1988             |
|----------------------------------|------------------|------------------|
| Land and improvements .....      | \$ 66,459        | \$ 64,858        |
| Buildings and improvements ..... | 140,644          | 129,931          |
| Machinery and equipment .....    | 565,830          | 508,068          |
| Construction in progress .....   | 37,773           | 28,395           |
|                                  | <u>\$810,706</u> | <u>\$731,252</u> |

Depreciation expense was \$48.7 million in 1989, \$46.6 million in 1988 and \$47.2 million in 1987.

Accumulated amortization of intangible and other assets was \$19.1 million and \$15.4 million at December 31, 1989 and 1988.

#### Accounts Payable:

|                  | 1989            | 1988             |
|------------------|-----------------|------------------|
| Trade .....      | \$92,905        | \$ 97,173        |
| Affiliates ..... | 5,508           | 8,026            |
|                  | <u>\$98,413</u> | <u>\$105,199</u> |

#### Income Taxes and Other Current

| Liabilities:                  | 1989            | 1988            |
|-------------------------------|-----------------|-----------------|
| Income taxes .....            | \$26,946        | \$28,029        |
| Employee compensation .....   | 22,236          | 19,672          |
| Taxes other than income ..... | 8,259           | 6,586           |
| Other .....                   | 17,052          | 19,919          |
|                               | <u>\$74,493</u> | <u>\$74,206</u> |

### Note 6 – Shareholders' Equity

There are 2,000,000 shares of serial preferred stock without par value that have been authorized. None of these shares have been issued.

Authorized common stock of the company at December 31, 1989 and 1988 was 120,000,000 shares without par value. Outstanding common shares shown on the balance sheet are after deducting treasury shares of 6,089,839 and 5,088,036 at December 31, 1989 and 1988.

In 1987, the company adopted a shareholder rights plan under which one right to buy one-half share of the company's common stock was distributed for each share of common stock held. The rights may become exercisable under certain circumstances involving actual or potential acquisitions of 20% or

more of the company's common stock by a person or affiliated persons who acquire such stock without complying with the requirements of the company's articles of incorporation. The rights would entitle shareholders, other than such person or affiliated persons, to purchase common stock of the company or certain acquiring persons at 50% of then current market value. The rights will expire in 1997 unless earlier redeemed.

In 1988, the company adopted another shareholder rights plan under which one right to buy preferred stock of the company was distributed for each share of common stock held. The dividend and redemption value of the preferred stock would be determined in relation to after-tax amounts which have been or may be recovered by the company from Exxon Corporation or its affiliates as a result of certain patent claims. In the event such recoveries exceed a specified sum, the rights may become exercisable under certain circumstances involving actual or potential acquisitions of 20% or more of the company's common stock by a person or affiliated persons. The rights would entitle shareholders, other than such person or affiliated persons, to purchase shares of preferred stock at a purchase price of \$1 plus 25 rights per share. The rights will expire in November 1991 unless earlier redeemed.

### Note 7 – Patent Litigation Settlement and Other Items

The patent litigation settlement in 1988 consisted of \$80 million in cash and \$6 million in trade credits and is presented net of directly related expenses.

The special charges recorded in 1988 include \$17.1 million for discontinuance of certain agricultural biotechnology research programs and the write-down of an investment, and \$14.1 million for write-down of several investments in the venture development area. In 1987, special charges were for a write-off of intangible assets in a plant science research program.

Other income-net consists of the following:

|   | 1989           | 1988            | 1987            |
|---|----------------|-----------------|-----------------|
| Gain on sale of investments .....                   | \$5,935        | \$10,242        | \$21,234        |
| Write-down of investment .....                      | (5,000)        |                 |                 |
| Equity earnings of non-consolidated companies ..... | 1,804          | 5,024           | 1,474           |
| Gains on investee stock issuances .....             |                |                 | 1,776           |
| Other — net .....                                   | 5,590          | 2,021           | 3,056           |
|   | <u>\$8,329</u> | <u>\$17,287</u> | <u>\$27,540</u> |

### Note 8 – Income Taxes

The company adopted Statement of Financial Accounting Standards (SFAS) No. 96, Accounting for Income Taxes, in 1988, which requires use of the liability method for recording income taxes. For prior periods, income taxes were determined by the deferred method as prescribed by previous accounting



standards. As a result of adopting SFAS No. 96, the company reduced its net deferred tax liabilities at January 1, 1988 by \$8.8 million, and recorded that amount in the consolidated statement of income as the cumulative effect of the accounting change.

Income before income taxes consists of the following:

|                     | 1989             | 1988             | 1987             |
|---------------------|------------------|------------------|------------------|
| United States ..... | \$ 48,469        | \$ 88,109        | \$ 54,747        |
| Foreign .....       | 89,277           | 97,641           | 74,452           |
| Total .....         | <u>\$137,746</u> | <u>\$185,750</u> | <u>\$129,199</u> |

The provision for income taxes consists of the following:

|                     | 1989            | 1988            | 1987            |
|---------------------|-----------------|-----------------|-----------------|
| Current:            |                 |                 |                 |
| United States ..... | \$ 4,428        | \$26,384        | \$16,687        |
| Foreign .....       | 38,709          | 41,652          | 34,847          |
|                     | <u>43,137</u>   | <u>68,036</u>   | <u>51,534</u>   |
| Deferred:           |                 |                 |                 |
| United States ..... | 293             | (13,641)        | (3,313)         |
| Foreign .....       | 336             | 149             | (357)           |
|                     | <u>629</u>      | <u>(13,492)</u> | <u>(3,670)</u>  |
| Total .....         | <u>\$43,766</u> | <u>\$54,544</u> | <u>\$47,864</u> |

Foreign taxes include withholding taxes. The United States tax provision includes the U.S. tax on foreign income distributed to the company. The differences between the provision for income taxes at the statutory rate (34% in 1989 and 1988; and 40% in 1987) and the tax shown in the consolidated statements of income are summarized as follows:

|  | 1989            | 1988            | 1987            |
|--|-----------------|-----------------|-----------------|
| Tax at statutory rate .....                | \$46,834        | \$63,155        | \$51,680        |
| Foreign sales corporation earnings ..      | (3,188)         | (2,380)         | (2,716)         |
| Losses of non-consolidated companies ..... |                 | (1,790)         |                 |
| Other .....                                | 120             | (4,441)         | (1,100)         |
| Tax shown in the statement of income ..... | <u>\$43,766</u> | <u>\$54,544</u> | <u>\$47,864</u> |

The components of deferred income tax expense are as follows:

|                                       | 1989          | 1988              | 1987             |
|---------------------------------------|---------------|-------------------|------------------|
| Accelerated depreciation .....        | \$(1,657)     | \$ 1,358          | \$ (448)         |
| Partnership expense allocations ..... | (465)         | 687               | 2,378            |
| Inventory adjustments .....           | (2,949)       | (1,538)           | (1,309)          |
| Prepaid/accrued expenses .....        | 1,315         | (970)             | (5,376)          |
| Write-down of investments .....       | 3,019         | (10,741)          |                  |
| Other .....                           | 1,366         | (2,288)           | 1,085            |
|                                       | <u>\$ 629</u> | <u>\$(13,492)</u> | <u>\$(3,670)</u> |

U.S. income taxes or foreign withholding taxes are not provided on undistributed earnings of foreign subsidiaries which are considered to be indefinitely reinvested in the operations of such subsidiaries. The amount of such earnings was approx-

imately \$169 million at December 31, 1989. Determination of the net amount of unrecognized U.S. income taxes with respect to these earnings is not practicable. If such earnings were to be repatriated, foreign withholding taxes of approximately \$19 million would be incurred. A portion or all of such withholding taxes may be offset by credits in the United States.

In 1988, Agrigenetics Corporation, a wholly owned subsidiary, was liquidated into The Lubrizol Corporation in a nontaxable transaction. As a result, net operating loss carryforwards, investment tax credits, and research and development tax credits were used to reduce taxes payable in 1988. This tax benefit was accounted for as a \$15.8 million reduction in intangible assets resulting from the acquisition of Agrigenetics.

#### Note 9 – Supplemental Cash Flow Information

Cash equivalents include highly liquid investments that are part of the company's cash management activities.

The following is a reconciliation of net income to net cash provided by (used for) operating activities:

|  | 1989             | 1988             | 1987             |
|--|------------------|------------------|------------------|
| Net income .....   | \$ 93,980        | \$139,957        | \$ 81,335        |
| Depreciation and amortization ..   | 54,065           | 50,680           | 53,108           |
| Deferred income taxes .....  | 1,128            | (13,478)         | (3,757)          |
| Write-down of assets .....   | 5,000            | 18,317           | 10,216           |
| Accounting change – taxes .....  |                  | (8,751)          |                  |
| Distributed (undistributed) earnings of non-consolidated companies ..... | 650              | (4,146)          | (4,167)          |
| Change in current assets and liabilities:                                |                  |                  |                  |
| Accounts receivable .....  | (6,932)          | (15,698)         | (13,527)         |
| Inventory .....  | (8,486)          | (20,395)         | (1,710)          |
| Accounts payable and accrued expenses .....                              | (8,463)          | 55,536           | (17,028)         |
| Other current assets .....   | (1,762)          | 75               | 1,320            |
| Increase in non-current liabilities ..                                   | 3,317            | 4,681            | 3,418            |
| Other items – net .....  | (7,592)          | 5,004            | 4,585            |
| Net cash provided by operating activities .....                          | <u>\$124,905</u> | <u>\$211,782</u> | <u>\$113,793</u> |

#### Note 10 – Retirement Plans

The company has retirement plans, including non-contributory defined benefit pension plans and a profit sharing plan, covering most full-time employees in the United States and non-U.S. subsidiaries. Pension benefits are based on years of service and the employee's compensation. The company's funding policy in the United States is to contribute amounts to satisfy the Internal Revenue Service funding standards and elsewhere to fund amounts in accordance with local regulations. Several defined benefit plans are unfunded. Plan assets are invested in listed equity securities and fixed income instruments including insurance contracts.



Expense for all retirement plans was \$8.9 million in 1989, \$7.8 million in 1988 and \$5.0 million in 1987, including profit sharing contributions in the U.S. of \$3.6 million in 1989, \$4.9 million in 1988 and \$2.9 million in 1987.

The company adopted SFAS No. 87, Employers' Accounting for Pensions, for its U.S. plans in 1986, for its United Kingdom plan in 1987 and for its other plans in 1989.

Net periodic pension cost of plans consisted of:

|   | 1989            | 1988            | 1987          |
|---|-----------------|-----------------|---------------|
|   |                 | (U.S. and U.K.) |               |
| Service cost — benefits earned during period .....  | \$ 6,007        | \$ 4,671        | \$ 4,490      |
| Interest cost on projected benefit obligation ..... | 8,402           | 6,355           | 5,573         |
| Actual return on plan assets .....                  | (19,554)        | (13,029)        | (4,242)       |
| Net amortization and deferral .....                 | 8,235           | 3,660           | (4,906)       |
| Net periodic pension cost .....                     | <u>\$ 3,090</u> | <u>\$ 1,657</u> | <u>\$ 915</u> |

The weighted average assumptions used at December 31, were:

|  | 1989 | 1988            | 1987 |
|--|------|-----------------|------|
|  |      | (U.S. and U.K.) |      |
| Assumed discount rate .....                  | 8.0% | 8.3%            | 8.3% |
| Assumed rate of compensation increase .....  | 5.7% | 6.0%            | 6.0% |
| Expected rate of return on plan assets ..... | 8.2% | 8.3%            | 8.3% |

The funded status of pension plans and the amounts recognized in the consolidated balance sheets at December 31 are as follows:

|  | 1989             |                   | 1988             |          |
|--|------------------|-------------------|------------------|----------|
|  | Assets           | Accum.            | Assets           | Accum.   |
|  | Exceed           | Benefits          | Exceed           | Benefits |
|  | Accum.           | Exceed            | Accum.           | Benefits |
|  | Benefits         | Assets            | Benefits         | Benefits |
|  |                  |                   | (U.S. and U.K.)  |          |
| Fair value of plan assets .....                                      | \$136,381        | \$ 2,775          | \$114,139        |          |
| Projected benefit obligation .....                                   | (93,455)         | (17,136)          | (85,822)         |          |
| Plan assets in excess of (less than) projected benefit obligation .. | 42,926           | (14,361)          | 28,317           |          |
| Unrecognized net transition obligation (asset) .....                 | (24,794)         | 3,385             | (26,949)         |          |
| Unrecognized net (gain) loss .....                                   | (21,179)         | 1,389             | (5,666)          |          |
| Unrecognized prior service cost ..                                   | 2,802            | 1,347             | 4,199            |          |
| Minimum liability adjustment ..                                      |                  | (439)             |                  |          |
| Accrued pension liability .....                                      | <u>\$ (245)</u>  | <u>\$ (8,679)</u> | <u>\$ (99)</u>   |          |
| Actuarial present value of accumulated benefit obligation ...        | <u>\$ 66,949</u> | <u>\$ 10,268</u>  | <u>\$ 61,980</u> |          |
| Vested benefits .....  | <u>\$ 63,909</u> | <u>\$ 8,929</u>   | <u>\$ 57,902</u> |          |

Health care benefits for retired employees are expensed as paid. The cost was \$1.1 million in 1989 and 1988 and \$1.2 million in 1987.

## Note 11 — Operations in Geographic Areas

Financial data by geographic area, based on the location of the subsidiary which conducted the activity, is as follows:

|  | 1989               | 1988               | 1987               |
|--|--------------------|--------------------|--------------------|
| Revenues from customers:                             |                    |                    |                    |
| United States .....                                  | \$ 589,013         | \$ 527,208         | \$ 463,179         |
| Europe .....   | 373,229            | 345,611            | 339,403            |
| Far East .....                                       | 143,096            | 130,137            | 110,678            |
| Other .....  | 122,572            | 122,775            | 109,017            |
|  | <u>1,227,910</u>   | <u>1,125,731</u>   | <u>1,022,277</u>   |
| Intercompany transfers:                              |                    |                    |                    |
| United States .....                                  | 207,816            | 163,042            | 149,809            |
| Europe .....   | 8,854              | 10,691             | 5,007              |
| Other .....  | 5,147              | 2,929              | 604                |
|  | <u>221,817</u>     | <u>176,662</u>     | <u>155,420</u>     |
| Gross revenues .....                                 | 1,449,727          | 1,302,393          | 1,177,697          |
| Less: Intercompany transfers .....                   | (221,817)          | (176,662)          | (155,420)          |
| Consolidated revenues .....                          | <u>\$1,227,910</u> | <u>\$1,125,731</u> | <u>\$1,022,277</u> |
| Operating profit:                                    |                    |                    |                    |
| United States .....                                  | \$ 65,463          | \$ 55,558          | \$ 55,822          |
| Europe .....   | 53,225             | 50,072             | 43,810             |
| Far East .....                                       | 12,937             | 18,116             | 14,817             |
| Other .....  | 13,358             | 13,465             | 9,795              |
| Eliminations .....                                   | (11,004)           | (1,970)            | (1,669)            |
|  | <u>133,979</u>     | <u>135,241</u>     | <u>122,575</u>     |
| General corporate expenses .....                     | (15,777)           | (19,399)           | (16,686)           |
| Patent litigation settlement .....                   |                    | 81,180             |                    |
| Special charges .....                                |                    | (31,154)           | (7,192)            |
| Other income — net .....                             | 8,329              | 17,287             | 27,540             |
| Interest — net .....                                 | 11,215             | 2,595              | 2,962              |
| Income before income tax and accounting change ..... | <u>\$ 137,746</u>  | <u>\$ 185,750</u>  | <u>\$ 129,199</u>  |
| Identifiable assets:                                 |                    |                    |                    |
| United States .....                                  | \$ 559,150         | \$ 521,877         | \$ 483,124         |
| Europe .....   | 202,405            | 189,632            | 204,045            |
| Far East .....                                       | 112,310            | 97,958             | 96,417             |
| Other .....  | 72,326             | 52,911             | 37,090             |
| Eliminations .....                                   | (126,120)          | (80,432)           | (59,834)           |
|  | <u>820,071</u>     | <u>781,946</u>     | <u>760,842</u>     |
| Corporate assets .....                               | 140,113            | 188,725            | 178,536            |
| Total assets .....                                   | <u>\$ 960,184</u>  | <u>\$ 970,671</u>  | <u>\$ 939,378</u>  |

### Notes:

- Intercompany transfers are made at prices comparable to normal unaffiliated customer sales for similar products.
- Affiliated companies are not allocated to geographic segments.
- Corporate assets consist of short-term investments and investments in affiliated companies.



Export sales from the United States to customers, primarily in Latin America and Asia, were \$125 million in 1989, \$110 million in 1988 and \$99 million in 1987.

Net assets of non-U.S. subsidiaries at December 31, 1989 and 1988 were \$311 million and \$287 million, respectively. Net income of these subsidiaries was \$52 million in 1989, \$55 million in 1988 and \$40 million in 1987 and dividends received from the subsidiaries were \$66 million, \$53 million and \$33 million, respectively.

#### Note 12 — Business Segment Information

A description of the company's segments and a summary of operating results and identifiable assets by segment are contained on pages 20 through 22. Following is additional industry segment information:

|                           | Capital<br>Expenditures | Depreciation<br>& Amortization |
|---------------------------|-------------------------|--------------------------------|
| <b>1989</b>               |                         |                                |
| Specialty Chemicals ..... | \$60,394                | \$46,084                       |
| Agribusiness .....        | 4,327                   | 7,981                          |
|                           | <u>\$64,721</u>         | <u>\$54,065</u>                |

#### Quarterly Financial Data (Unaudited)

|   | Three Months Ended |                  |                  |                  |
|---|--------------------|------------------|------------------|------------------|
|   | March 31           | June 30          | Sept. 30         | Dec. 31          |
| <b>1989</b>   |                    |                  |                  |                  |
| Net sales:  |                    |                  |                  |                  |
| Specialty Chemicals .....                                 | \$287,348          | \$293,932        | \$267,472        | \$268,088        |
| Agribusiness .....  | 55,782             | 31,690           | 5,535            | 10,539           |
| Total .....   | <u>\$343,130</u>   | <u>\$325,622</u> | <u>\$273,007</u> | <u>\$278,627</u> |
| Gross profit:   |                    |                  |                  |                  |
| Specialty Chemicals .....                                 | \$ 83,574          | \$ 87,599        | \$ 78,404        | \$ 71,208        |
| Agribusiness .....  | 21,570             | 12,485           | 916              | 54               |
| Total .....   | <u>\$105,144</u>   | <u>\$100,084</u> | <u>\$ 79,320</u> | <u>\$ 71,262</u> |
| Net income .....  | <u>\$ 30,700</u>   | <u>\$ 26,016</u> | <u>\$ 21,351</u> | <u>\$ 15,913</u> |
| Net income per share .....                                | \$.82              | \$.70            | \$.57            | \$.43            |
| <b>1988</b>   |                    |                  |                  |                  |
| Net sales:  |                    |                  |                  |                  |
| Specialty Chemicals .....                                 | \$249,619          | \$250,968        | \$257,711        | \$269,322        |
| Agribusiness .....  | 43,589             | 33,499           | 6,182            | 6,603            |
| Total .....   | <u>\$293,208</u>   | <u>\$284,467</u> | <u>\$263,893</u> | <u>\$275,925</u> |
| Gross profit:   |                    |                  |                  |                  |
| Specialty Chemicals .....                                 | \$ 70,199          | \$ 77,302        | \$ 81,493        | \$ 77,247        |
| Agribusiness .....  | 16,536             | 10,628           | 518              | 457              |
| Total .....   | <u>\$ 86,735</u>   | <u>\$ 87,930</u> | <u>\$ 82,011</u> | <u>\$ 77,704</u> |
| Income before change in accounting for income taxes ..... | <u>\$ 23,774</u>   | <u>\$ 22,306</u> | <u>\$ 10,683</u> | <u>\$ 74,443</u> |
| Net income .....  | <u>\$ 32,525</u>   | <u>\$ 22,306</u> | <u>\$ 10,683</u> | <u>\$ 74,443</u> |
| Net income per share:                                     |                    |                  |                  |                  |
| Before accounting change .....                            | \$.61              | \$.58            | \$.28            | \$1.93           |
| Net income .....  | \$.83              | \$.58            | \$.28            | \$1.93           |

Most of the sales of the Agribusiness segment are made during the first half of the year, and operating losses are incurred in the third and fourth quarters as a result of incurring operating expenses with low sales. Agribusiness' cost of sales includes certain period costs and, therefore, may exceed sales in a quarter which has low volume.

Net income per share reported in 1988 includes gain on sale of investments of \$.12 and \$.06 in the first and second quarters; special charges of \$(.36) and \$(.08) in the third and fourth quarters; and income from the patent litigation settlement of \$1.37 in the fourth quarter.



Note 12 continued

|                           | Capital<br>Expenditures | Depreciation<br>& Amortization |
|---------------------------|-------------------------|--------------------------------|
| <b>1988</b>               |                         |                                |
| Specialty Chemicals ..... | \$52,000                | \$43,147                       |
| Agribusiness .....        | 2,611                   | 7,533                          |
|                           | <u>\$54,611</u>         | <u>\$50,680</u>                |
| <b>1987</b>               |                         |                                |
| Specialty Chemicals ..... | \$40,077                | \$44,166                       |
| Agribusiness .....        | 1,963                   | 8,942                          |
|                           | <u>\$42,040</u>         | <u>\$53,108</u>                |

The company's ten largest customers in the Specialty Chemicals segment, most of which are international oil companies and a number of which are groups of affiliated entities, accounted for approximately 45% of consolidated sales in 1989, 43% in 1988, and 41% in 1987.

**Note 13 – Employee Stock Options**

The 1985 Employee Stock Option Plan provides for the granting of either options intended to qualify as "incentive stock options" under the Internal Revenue Code or "non-statutory stock options" not intended to qualify, up to an aggregate of 1,500,000 shares. Options are granted for terms of up to ten years. Depending on date of issue, options become exercisable in increments of 25% or 50% after one year from date of grant and in 25% annual increments thereafter. The 1981 Incentive Stock Option Plan was superseded by the 1985 Plan, and the 1975 Employee Stock Option Plan expired in January 1985, although outstanding options under both plans are still exercisable. The

option price under all plans is the fair market value of the shares on date of grant. All plans permit or permitted the granting of stock appreciation rights in connection with options. When Agrigenetics was acquired, options outstanding under a stock option plan of that company became fully vested and were converted to options to purchase Lubrizol shares, based on the fair market value of Lubrizol shares.

Information regarding these option plans is as follows:

|  | Number of Shares |                  |                  |
|--|------------------|------------------|------------------|
|  | 1989             | 1988             | 1987             |
| Outstanding, January 1 .....                         | 607,693          | 693,896          | 628,680          |
| Granted \$27.38 to \$43.06<br>per share .....        | 198,000          |                  | 145,300          |
| Exercised at \$18.63 to \$39.74<br>per share .....   | (124,893)        | (70,154)         | (69,195)         |
| Surrendered at \$21.13 to<br>\$39.74 per share ..... | (1,838)          | (16,049)         | (10,889)         |
| Outstanding, December 31 ...                         | <u>678,962</u>   | <u>607,693</u>   | <u>693,896</u>   |
| Exercisable, December 31 ....                        | <u>296,139</u>   | <u>333,443</u>   | <u>391,990</u>   |
| Available for grant,<br>December 31 .....            | <u>1,005,164</u> | <u>1,201,326</u> | <u>1,185,277</u> |

The 1975 Plan options expire through November 1994, with an average option price of \$22.69. The 1981 Plan options expire November 1991 to November 1994, with an average option price of \$22.82. The 1985 Plan options expire June 1995 to June 1999, with an average option price of \$34.62. The Agrigenetics options expire December 1991 to July 1994, with an average option price of \$33.51.

**Independent Auditors' Report**

**Deloitte & Touche**



To the Shareholders and Board of Directors  
The Lubrizol Corporation:

We have audited the accompanying consolidated balance sheets of The Lubrizol Corporation and its subsidiaries as of December 31, 1989 and 1988 and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 1989. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluat-

ing the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of The Lubrizol Corporation and its subsidiaries at December 31, 1989 and 1988 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1989 in conformity with generally accepted accounting principles.

As discussed in Note 8 to the financial statements, in 1988 the Company changed its method of accounting for income taxes to conform with Statement of Financial Accounting Standards No. 96.

*Deloitte & Touche*

Cleveland, Ohio  
February 26, 1990

**Ten Year Summary***(In Thousands of Dollars Except Per Share Data)*

|  | 1989              | 1988              | 1987              |
|--|-------------------|-------------------|-------------------|
| <b>Summary of Operations</b>                                   |                   |                   |                   |
| Revenues . . . . .   | \$1,227,910       | \$1,125,731       | \$1,022,277       |
| Cost of sales . . . . .  | 864,576           | 783,113           | 713,152           |
| Selling, testing, administrative & research expenses . . . . . | 245,132           | 226,776           | 203,236           |
| Total cost and expenses . . . . .                              | <u>1,109,708</u>  | <u>1,009,889</u>  | <u>916,388</u>    |
| Other income (charges) . . . . .                               | 19,544            | 69,908            | 23,310            |
| Income before income taxes . . . . .                           | 137,746           | 185,750           | 129,199           |
| Provision for income taxes . . . . .                           | 43,766            | 54,544            | 47,864            |
| Change in accounting for income taxes . . . . .                |                   | 8,751             |                   |
| Net income . . . . .   | <u>\$ 93,980</u>  | <u>\$ 139,957</u> | <u>\$ 81,335</u>  |
| For the Year:  |                   |                   |                   |
| Net income per share . . . . .                                 | \$2.52            | \$3.62            | \$2.06            |
| Dividends declared per share . . . . .                         | 1.38              | 1.30              | 1.22              |
| Average Common Shares outstanding (in thousands) . . . . .     | 37,333            | 38,695            | 39,559            |
| <b>Consolidated Statement of Financial Position</b>            |                   |                   |                   |
| Current assets . . . . .                                       | \$ 543,166        | \$ 573,002        | \$ 513,342        |
| Current liabilities . . . . .                                  | 180,908           | 184,888           | 169,166           |
| Working capital . . . . .                                      | 362,258           | 388,114           | 344,176           |
| Property – net . . . . .                                       | 316,493           | 298,670           | 297,573           |
| Other assets . . . . .   | 100,525           | 98,999            | 128,463           |
| Total . . . . .  | <u>779,276</u>    | <u>785,783</u>    | <u>770,212</u>    |
| Less:  |                   |                   |                   |
| Long-term debt . . . . .                                       | 53,180            | 55,339            | 56,138            |
| Non-current liabilities . . . . .                              | 29,320            | 26,851            | 23,952            |
| Deferred income taxes . . . . .                                | 33,512            | 39,285            | 68,489            |
| Net assets – Shareholders' equity . . . . .                    | <u>\$ 663,264</u> | <u>\$ 664,308</u> | <u>\$ 621,633</u> |
| <b>Other Data</b>  |                   |                   |                   |
| Return on average shareholders' equity . . . . .               | 14%               | 22%               | 14%               |
| Total assets . . . . .   | \$ 960,184        | \$ 970,671        | \$ 939,378        |
| Capital investments . . . . .                                  | 82,720            | 71,891            | 56,460            |
| Depreciation . . . . .   | 48,682            | 46,598            | 47,229            |
| At End of Year   |                   |                   |                   |
| Number of employees . . . . .                                  | 5,307             | 4,781             | 4,817             |
| Number of shareholders . . . . .                               | 7,370             | 7,782             | 8,335             |
| Common Shares outstanding (in thousands) . . . . .             | 37,008            | 38,010            | 38,961            |
| Shareholders' equity per share . . . . .                       | \$ 17.92          | \$ 17.48          | \$ 15.96          |



| 1986             | 1985             | 1984             | 1983             | 1982             | 1981             | 1980             |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| \$985,182        | \$913,351        | \$844,175        | \$800,303        | \$812,247        | \$899,161        | \$922,697        |
| 695,068          | 659,130          | 627,378          | 588,266          | 610,717          | 653,748          | 644,080          |
| 180,650          | 158,358          | 114,501          | 113,363          | 107,470          | 96,006           | 86,980           |
| 875,718          | 817,488          | 741,879          | 701,629          | 718,187          | 749,754          | 731,060          |
| 19,200           | 7,582            | 12,788           | 15,032           | (6,739)          | 8,168            | 3,575            |
| 128,664          | 103,445          | 115,084          | 113,706          | 87,321           | 157,575          | 195,212          |
| 50,479           | 43,221           | 47,353           | 48,962           | 39,760           | 65,544           | 83,701           |
| <u>\$ 78,185</u> | <u>\$ 60,224</u> | <u>\$ 67,731</u> | <u>\$ 64,744</u> | <u>\$ 47,561</u> | <u>\$ 92,031</u> | <u>\$111,511</u> |
| \$1.97           | \$1.49           | \$1.73           | \$1.65           | \$1.21           | \$2.36           | \$2.87           |
| 1.17             | 1.16             | 1.12             | 1.08             | 1.08             | 1.08             | .90              |
| 39,678           | 40,409           | 39,138           | 39,195           | 39,192           | 38,986           | 38,850           |
| \$462,982        | \$447,441        | \$376,050        | \$361,964        | \$304,542        | \$341,825        | \$346,001        |
| 162,797          | 182,543          | 132,252          | 129,766          | 115,255          | 129,696          | 136,835          |
| 300,185          | 264,898          | 243,798          | 232,198          | 189,287          | 212,129          | 209,166          |
| 289,078          | 290,298          | 251,735          | 274,337          | 288,504          | 284,088          | 248,664          |
| 125,847          | 116,706          | 74,189           | 46,563           | 50,698           | 47,252           | 56,472           |
| 715,110          | 671,902          | 569,722          | 553,098          | 528,489          | 543,469          | 514,302          |
| 52,616           | 73,444           | 30,416           | 27,213           | 19,428           | 25,268           | 22,846           |
| 16,806           | 13,161           | 11,480           | 10,038           | 8,961            | 8,829            | 13,653           |
| 73,009           | 65,999           | 53,483           | 44,326           | 38,056           | 30,854           | 25,016           |
| <u>\$572,679</u> | <u>\$519,298</u> | <u>\$474,343</u> | <u>\$471,521</u> | <u>\$462,044</u> | <u>\$478,518</u> | <u>\$452,787</u> |
| 14%              | 12%              | 14%              | 14%              | 10%              | 20%              | 27%              |
| \$877,907        | \$854,445        | \$701,974        | \$682,864        | \$643,744        | \$673,165        | \$651,137        |
| 52,986           | 103,990          | 49,001           | 27,961           | 64,044           | 77,214           | 99,403           |
| 42,591           | 44,605           | 38,723           | 37,038           | 37,168           | 32,068           | 23,414           |
| 4,802            | 5,205            | 4,176            | 4,165            | 4,322            | 4,237            | 4,155            |
| 9,240            | 10,803           | 10,804           | 11,277           | 10,615           | 9,986            | 9,004            |
| 39,691           | 39,661           | 39,111           | 39,195           | 39,195           | 39,946           | 39,863           |
| \$ 14.43         | \$ 13.09         | \$ 12.13         | \$ 12.03         | \$ 11.79         | \$ 11.98         | \$ 11.36         |

## CORPORATE INFORMATION

### Directors

#### L. E. COLEMAN

Chairman of the Board  
and Chief Executive Officer

#### W. G. BARES

President and Chief Operating Officer

#### ANDRE GILLET

Retired Chairman and Chief Executive  
Officer and a Director of International  
Multifoods Corporation, a diversified food  
company

#### DAVID H. HOAG

President and Chief Executive Officer of  
LTV Steel Company and Executive Vice  
President - Steel and a Director of The  
LTV Corporation, a steelmaker producing  
flat rolled and tubular products

#### THOMAS C. MacAVOY

Professor of Business Administration,  
Darden School, University of Virginia  
and Retired Vice Chairman of the Board of  
Corning, Inc., a diversified glass and glass  
products company

#### RICHARD A. MILLER

Chairman and Chief Executive Officer of  
Centerior Energy Corporation, holding  
company for two electric utilities, The  
Cleveland Electric Illuminating Company  
and The Toledo Edison Company

#### RENOLD D. THOMPSON

President, Chief Executive Officer and  
a Director of Oglebay Norton Company,  
a raw materials and Great Lakes marine  
transportation company

#### KARL E. WARE

Chairman and Chief Executive Officer  
of Ware Industries, Inc., a company which  
designs, manufactures and markets a broad  
range of specialty wire forms and steel  
components

### Officers

#### L. E. COLEMAN

Chairman of the Board  
and Chief Executive Officer

#### W. G. BARES

President and Chief Operating Officer

#### PHILIP L. KRUG

Executive Vice President

#### W. T. BEARGIE

Senior Vice President - Finance

#### GEORGE R. HILL

Senior Vice President

#### ROGER Y. K. HSU

Senior Vice President

#### WILLIAM D. MANNING

Senior Vice President

#### ROBERT W. SCHER

Senior Vice President

#### JEAN-POL ARZUL

Vice President

#### R. JOHN SENZ

Vice President

#### JOHN A. STUDEBAKER

Vice President

#### RAY A. ANDREAS

Corporate Controller

#### J. R. COOPER

Controller - Financial Services

#### WILLIAM R. JONES

Treasurer

#### J. I. RUE

Secretary

### Transfer Agent, Registrar, and Dividend Disbursing Agent

National City Bank  
P.O. Box 92301  
Cleveland, Ohio 44193-0900  
(216) 575-2529

### Annual Meeting

The Annual Meeting of Shareholders  
will be held at the offices of The  
Lubrizol Corporation on Monday,  
April 23, 1990.

### Form 10-K

The Form 10-K Annual Report to the  
Securities and Exchange Commission  
will be available April 1. A copy may  
be obtained without charge upon  
written request to the Secretary of  
the Corporation.

### Shareholder Information

The Common Shares of The Lubrizol  
Corporation are listed on the New  
York Stock Exchange under the  
symbol LZ. The number of share-  
holders of record of Common Shares  
was 7,507 as of February 9, 1990.



## Specialty Chemicals

LUBRIZOL PETROLEUM CHEMICALS COMPANY  
LUBRIZOL BUSINESS DEVELOPMENT COMPANY

### Principal Subsidiaries and Branches

Lubrizol A.G. (Switzerland)  
Lubrizol Australia  
Lubrizol Canada Limited  
Lubrizol de Chile Limitada  
Lubrizol Eastern Pacific Limited  
(Hong Kong)  
Lubrizol Enterprises, Inc.  
Lubrizol Española, S.A.  
Lubrizol France S.A.  
Lubrizol Gesellschaft m.b.H.  
(Austria)  
Lubrizol G.m.b.H.  
(West Germany)  
Lubrizol Great Britain Limited  
Lubrizol International, Inc.  
Lubrizol Italiana S.p.A.  
Lubrizol Japan Ltd.  
Lubrizol Limited (England)  
Lubrizol de Mexico,  
S. de R.L.  
Lubrizol S.A. (Belgium)  
Lubrizol Scandinavia AB  
Lubrizol Servicios Tecnicos  
S. de R.L. (Mexico)  
Lubrizol South Africa  
(Proprietary) Limited  
Lubrizol Southeast Asia  
(Pte.) Ltd. (Singapore)  
Nippon Lubrizol Industries  
Corporation (Japan)  
Gate City Oil Equipment  
Company, Inc.  
Industria de Aditivos do Brasil  
S.A.

### Affiliates

Lubrizol India Limited  
Industrias Lubrizol S.A. de  
C.V. (Mexico)  
Lubrizol Transarabian Company  
Limited (Saudi Arabia)  
C.A. Lubricantes Quimicos L.Q.  
(Venezuela)

### Manufacturing Plants

Painesville, Ohio  
Bayport, Texas  
Deer Park, Texas  
Atlanta, Georgia  
Sydney, Australia  
Rio de Janeiro, Brazil  
Niagara Falls, Canada  
Bromborough, England  
LeHavre, France  
Rouen, France  
Bombay, India  
Kinuura, Japan  
Apodaca, Mexico  
Yanbu, Saudi Arabia  
Jurong, Singapore  
Durban, South Africa  
Huelva, Spain  
Valencia, Venezuela

### Laboratories

Chemical Research  
Wickliffe, Ohio  
Mechanical Testing  
Atsugi, Japan  
Hazelwood, England  
Wickliffe, Ohio

## Agribusiness

AGRIGENETICS COMPANY

### Seed Divisions

AgriGene  
Des Moines, Iowa  
Golden Acres Seed Company  
Croton, Ohio  
GroAgri Seed  
Lubbock, Texas  
Jacques Seed  
Prescott, Wisconsin  
McCurdy Seed  
Fremont, Iowa  
SIGCO Research  
Breckenridge, Minnesota  
Taylor-Evans Seed Company  
Tulia, Texas  
R.C. Young and Company  
Lubbock, Texas

### Specialty Vegetable Oil Division

SVO Enterprises  
Eastlake, Ohio

### Affiliate

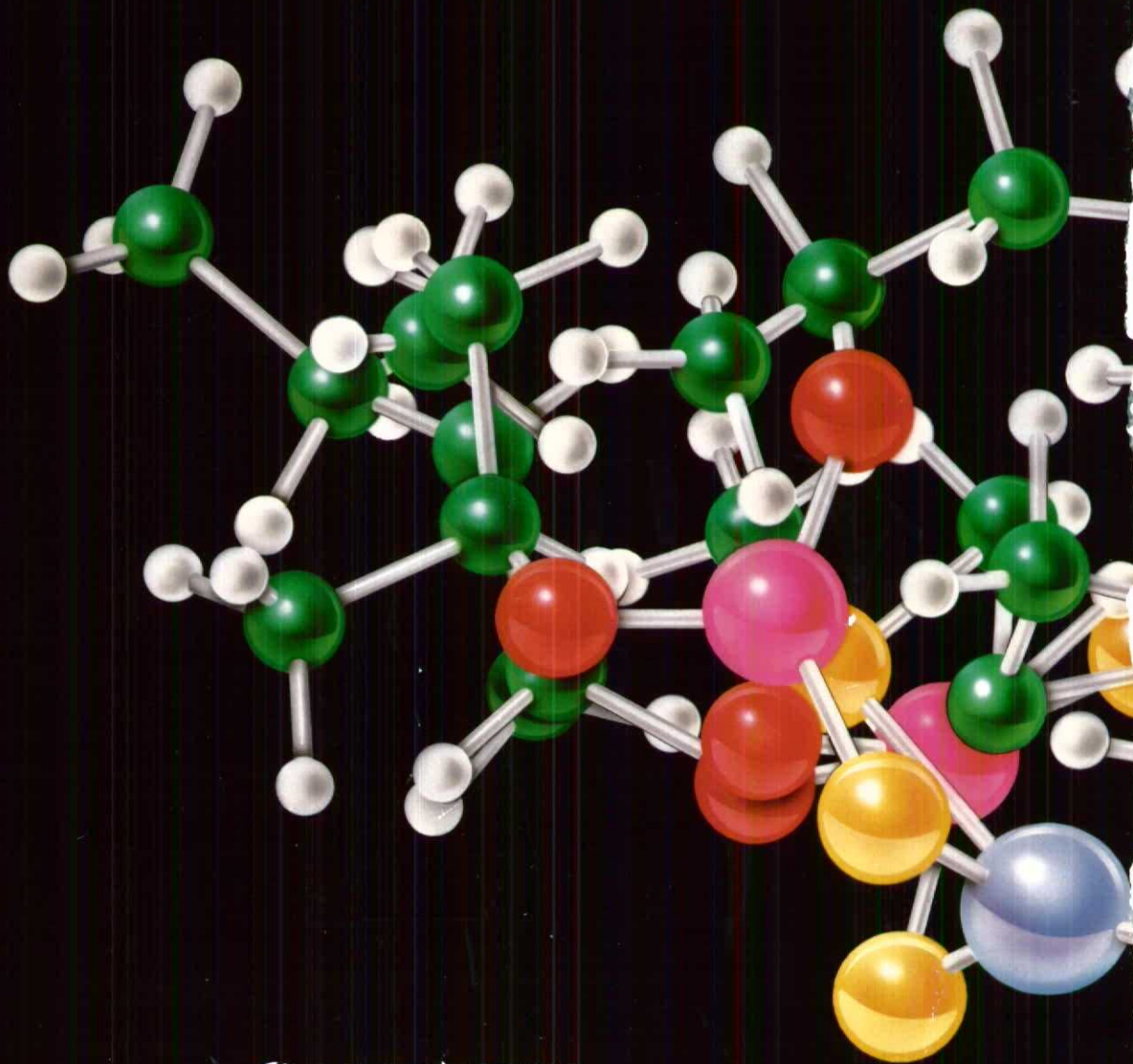
Helizea-Agrigenetics S.p.A.  
(Italy)  
Dectesca S.A.  
(Venezuela)  
Eurograin Semences, S.A.  
(France)

### Laboratory

Biotechnology Research  
Madison, Wisconsin



29400 Lakeland Boulevard  
Wickliffe, Ohio 44092  
(216) 943-4200



 **LUBRIZOL**