

American Cyanamid Company Annual Report 1970



TABLE OF CONTENTS

Letter to the Shareholders — pages 1-2

Year In Review — pages 4-16

Divisions and Principal Subsidiaries — page 17

Financial Review, Accountants' Report — pages 18-23

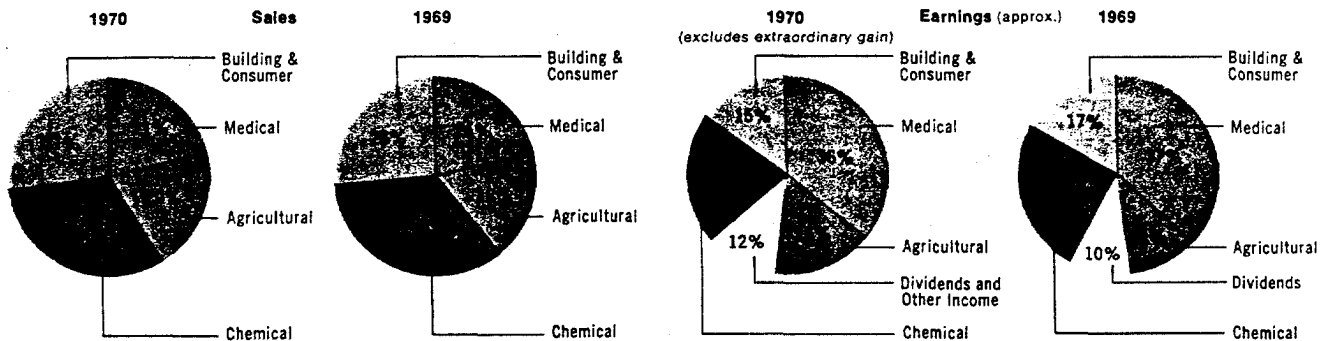
Ten Year Comparative Summary — pages 24-25

Plants, Laboratories and Offices — back cover

American Cyanamid Company

Report of the Board of Directors for the Year Ended December 31, 1970

Contributions of Major Segments to Sales and Earnings



American Cyanamid Company and Subsidiaries

Highlights

For the Years Ended December 31, 1970 and 1969

		1970	1969
Operating Results	Sales	\$1,158,439,700	\$1,087,097,977
	Earnings before income taxes	157,925,927*	166,870,096
	Income taxes	66,400,000*	77,000,000
	Net earnings	91,525,927*	89,870,096
	Dividends on Common Stock paid in cash	55,378,403	55,107,596
	Earnings per share Common Stock	2.04*	2.02
	Dividends per share Common Stock	1.25	1.25
	Depreciation and depletion	58,513,790	54,834,159
	Expenditures for capital additions	92,671,605	95,833,461
Year-End Position	Total assets	1,065,927,628	1,000,872,093
	Funded debt	116,996,355	118,993,967
	Shareholders' equity	730,795,990	690,829,736
	Shares outstanding at end of year:		
	Common Stock (excluding treasury shares)	44,869,954	44,366,194
	Number of shareholders	118,444	122,219
	Number of employees	38,020	36,325

*Including extraordinary gain (less related income tax of \$1,900,000) of \$4,850,526 or 11¢ per share

Cover: Cyanamid is a diversified, consumer-oriented company, active in leading growth areas of the economy and responsive to basic human needs throughout the world.

To Our Shareholders:

Cyanamid's business continued to expand during 1970, and worldwide sales set another record. Sales in 1970 were \$1,158,440,000, up 7% from \$1,087,098,000 in 1969. Despite the general economic slowdown in the United States, sales increases in those areas of Cyanamid's business less vulnerable to fluctuations in the economy — medical, consumer, and agricultural—more than offset the softness in chemicals, acrylic fibers, and building products, where the effect of the slowdown was apparent. Higher sales outside the United States and a fibers acquisition completed late in 1969 also contributed to the increase.

Including an extraordinary gain of \$4,850,000 or 11¢ per share, 1970 earnings were \$91,526,000 or \$2.04 per share, compared to \$89,870,000 or \$2.02 per share in 1969. Without the extraordinary gain, 1970 earnings were \$86,676,000 or \$1.93 per share.

The extraordinary gain resulted from the sale of Cyanamid's 49% interest in Southern Minerals Corporation, Southern Pipeline Corporation, and Southern Petroleum Corporation.

In the comparison with 1969, earnings for 1970, before the extraordinary gain, benefited from the higher volume and lower income taxes. These benefits were more than offset, however, by lower profit margins, higher interest expense, and larger promotional expenses on new products. Productivity continues to lag behind the inflationary increases in salary,



Clifford D. Siverd, President and Chief Executive Officer

wage, and employee benefit costs and higher transportation expenses. Moreover, despite firming in some product lines, selling prices overall were somewhat lower than a year ago, especially for fibers, building products, medical products, and some agricultural products overseas. In some areas of business the pressure on profit margins became more pronounced in the third and fourth quarters.

During the year, Cyanamid continued its expansion into new high-growth business areas. In December, agreement for merger was reached between Cyanamid and Shulton, Inc., with the Shulton common stockholders to receive 0.96 share of Cyanamid common stock in exchange for each

common share of Shulton. The merger is expected to become effective in the spring of 1971. With this move, Cyanamid enters the field of cosmetics and toiletries.

In September the company entered the business of residential construction and community development when The Ervin Company, a developer of residential communities in the Southeast with headquarters at Charlotte, North Carolina, became a part of the Cyanamid organization. In November, Sunstate Builders, Inc., a residential developer in the Tampa, Florida, area, was acquired.

Other acquisitions were Farmer Electric Products Co., Inc., and Chem Lab Corporation. Farmer Electric is a

manufacturer of photoelectric and related industrial-control products employed in equipment marketed by Cyanamid's Decision Making Systems Department. Chem Lab Corporation is a small company which owns two clinical and diagnostic laboratories.

Capital expenditures in 1970, primarily for new and enlarged production facilities and for acquisitions, were approximately \$93 million, as compared with \$96 million in 1969.

Along with the year's moves toward expansion and modernization, Cyanamid intensified its continuing examination of its many existing businesses. Some of these have grown mature, and in cases where the company has found it possible to maintain its market position with less marketing and technical effort than previously expended, this effort is being reduced. In some other businesses, profitability or growth prospects have declined, and moves have been made for orderly de-emphasis or, in extreme cases, elimination. Thus Cyanamid's interest in the Southern group of companies was sold, as already mentioned; Formica Corporation began phasing out of its relatively small and unprofitable industrial plastic laminates business; and plans were announced to close a small and obsolete titanium dioxide plant at Piney River, Virginia, in June 1971.

The objective of such moves is to assure optimum use of Cyanamid's resources, and these steps have been

accompanied by further streamlining of the company's organization. The Plastics Division was merged with the Industrial Chemicals Division, effective January 1, 1971, to form the new Industrial Chemicals and Plastics Division.

With the general concern over social and environmental problems mounting rapidly, Cyanamid continued its efforts to aid in their solution. Capital expenditures for pollution control during the year were approximately \$5,500,000, bringing the cumulative total of such expenditures to approximately \$50,000,000 to date. The annual cost of operating Cyanamid's pollution-control facilities, manned by a work force equivalent to 250 full-time employees, is approximately \$10,000,000.

During 1970 the company stepped up its efforts in the recruiting of employees from minority groups, and it made significant progress both in hiring candidates from the ranks of the disadvantaged and in improving the retention rate for such employees. The company hopes for further progress in these areas during 1971, but the economic slowdown is making such progress increasingly difficult.

We record with regret the death on September 13 of Burton F. Bowman, vice president. At the time of his death, Mr. Bowman, who had joined Cyanamid in 1954 and served the company with distinction in a number of key assignments, had opera-

tional responsibility for the Consumer Products and Fibers Divisions and for directing the functions of Cyanamid with respect to Formica Corporation. These responsibilities were assumed by George W. Russell, executive vice president.

To look ahead, the prospects for the U. S. economy in 1971 are still uncertain. While there are some signs that the pace of inflation may be abating to some extent, the costs of doing business remain under strong upward pressure. Furthermore, the softness in chemicals, fibers, and building products has continued into 1971. However, many economists are cautiously optimistic that the second half of the year will bring the resumption of at least modest growth in the economy. When the turnaround in the economy materializes, Cyanamid, with its broad diversification and its many strengths, is in an excellent position to benefit.

As always, our greatest asset is our people. For their competence and dedication, we are grateful.

For the Board of Directors



PRESIDENT

*Wayne, New Jersey
February 9, 1971*



Members of the Executive Committee are (left to right): Dr. Robert C. Swain, Executive Vice President; Dr. Nolan B. Sommer, Executive Vice President; Mr. Siverd, Committee Chairman; George W. Russell, Executive Vice President; and Gordon C. Walker, Executive Vice President.



Vice Presidents and Directors Thomas P. Forbath (left) and Ernest G. Hesse



Vice Presidents Dr. James F. Bourland (left) and Thomas P. Turchan



Leonard T. Murphy, Treasurer (left), Harold B. Gross, Secretary and General Counsel (center), and J. Clifford Blauvelt, Controller

BOARD OF DIRECTORS

JAMES B. FISK
THOMAS P. FORBATH
ERNEST G. HESSE
L. EMERY KATZENBACH
IAN K. MAC GREGOR
THOMAS L. PERKINS
GEORGE W. RUSSELL
CLIFFORD D. SIVERD
NOLAN B. SOMMER
ROBERT C. SWAIN
GORDON C. WALKER

OFFICERS

CLIFFORD D. SIVERD, *President and Chief Executive Officer*
GEORGE W. RUSSELL, *Executive Vice President*
NOLAN B. SOMMER, *Executive Vice President*
ROBERT C. SWAIN, *Executive Vice President*
GORDON C. WALKER, *Executive Vice President*
JAMES F. BOURLAND, *Vice President*
THOMAS P. FORBATH, *Vice President*
ERNEST G. HESSE, *Vice President*
THOMAS P. TURCHAN, *Vice President*
J. CLIFFORD BLAUVELT, *Controller*
HAROLD B. GROSS, *Secretary and General Counsel*
LEONARD T. MURPHY, *Treasurer*

FINANCE COMMITTEE

JAMES B. FISK, *Chairman*
L. EMERY KATZENBACH
IAN K. MAC GREGOR
THOMAS L. PERKINS
CLIFFORD D. SIVERD (*ex-officio*)
GORDON C. WALKER

EXECUTIVE COMMITTEE

CLIFFORD D. SIVERD, *Chairman*
GEORGE W. RUSSELL
NOLAN B. SOMMER
ROBERT C. SWAIN
GORDON C. WALKER

Year in Review

The highlights of 1970 in Cyanamid's major market segments are presented in the following pages. Further information on sales and earnings will be found in the Financial Review on page 18. The operating divisions and principal subsidiaries, and their more important product lines, are listed on page 17.

Building and Consumer

	1970	1969
Worldwide Sales (\$ millions)	\$315	\$278
% Total Sales (approx.)	27%	26%
% Total Earnings (approx.)	15%	17%

In recent years, this has been the fastest-growing segment of Cyanamid's business. It includes the principal Cyanamid products promoted directly to the consumer—BRECK® hair-care preparations, the household products, Cyanamid's fibers, wall coverings, FORMICA® brand laminates, and other specialty building products.

In this part of the business, the year was marked by the introduction of a number of promising new products and by the integration into Cyanamid's fibers business of the polyester and rayon fiber products acquired with the I.R.C. Fibers Division of Midland-Ross Corporation at the end of 1969.

Sales of building and consumer products were higher in 1970 than in 1969 as a result of the acquisition of the I.R.C. fibers. A rise in sales of consumer products was not sufficient to offset declines for acrylic fibers

and the products marketed by Formica Corporation. Earnings declined, chiefly because of lower selling prices for fibers and building products, higher operating costs, and larger expenditures for advertising and promotion of new products.

In December, agreement for merger was reached between Cyanamid and Shulton, Inc., a leading international producer and marketer of toiletry, fragrance, and cosmetic products with headquarters in Clifton, New Jersey. Among Shulton's major brand names are OLD SPICE® shaving preparations, MAN-POWER® deodorants, DESERT FLOWER® skin-care and bath products, CORN SILK® cosmetics, and NINA RICCI® and CARVEN® perfumes and fragrances. The merger of Shulton with a subsidiary of Cyanamid is subject to the approval of the Shulton common stockholders and is expected to become effective early in the second quarter of 1971. Holders of Shulton common stock will receive 0.96 share of Cyanamid common stock for each Shulton share. After the merger, the Shulton business will continue to operate under the Shulton name in its present location and with its present management.

Consumer Products: The year brought a rise in sales of consumer products both in the United States and abroad, and the increase reflects not only new product introductions but also improved formulating, packaging, and marketing of existing products.

In the hair-care product group, Breck's line of shampoos for dry, normal, and oily hair showed a sales gain for the year, aided by packaging in new plastic shatterproof containers and adoption of a new formula that conditions hair while both wet and dry. FRESH HAIR® instant dry shampoo, introduced nationally during the third quarter, received rapid trade acceptance, with indications that consumer use will make it an important contender in this part of the shampoo market.

During the third quarter, BRECK SATIN® hair conditioner was introduced as a complement to BRECK BASIC® hair texturizer, with which Breck virtually created a new hair-



In the Breck hair-care line, FRESH HAIR® instant shampoo and BRECK SATIN® hair conditioner were introduced in 1970, BRECK BASIC® texturizing shampoo in early 1971.

care product category two years ago. BRECK SATIN, formulated for hair that tends to be dry, brittle, or color-coarse has met with good consumer response.

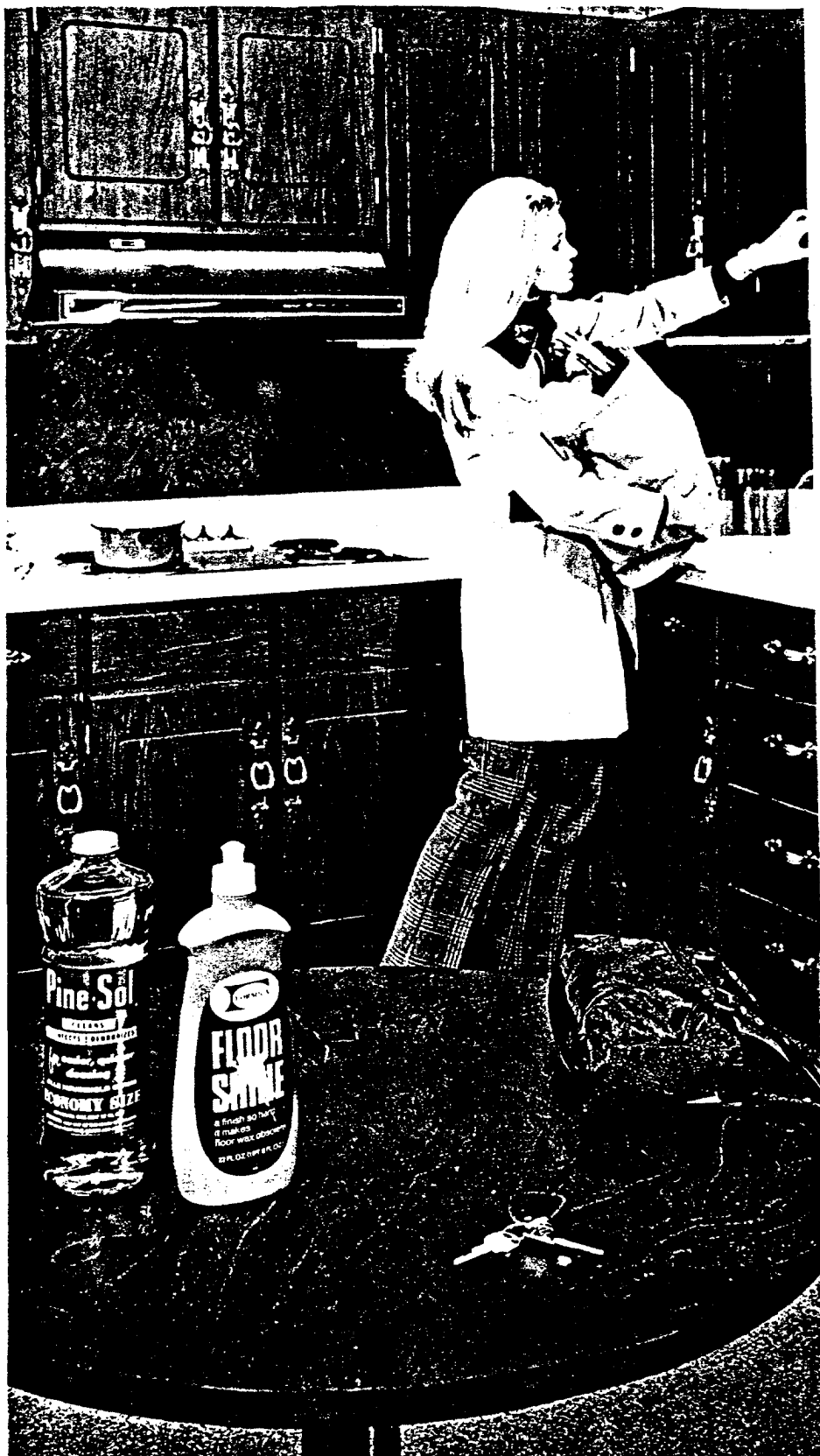
The Miss BRECK® hair sprays showed a significant sales gain for the year, supported by the introduction of a new larger-size package and increased promotional activity in the youth market. Also, the BRECK® hair color line was broadened during the year with the introduction of three new shades.

To aid in meeting the expanded demand and to further improve service to customers in the West and Midwest, construction was begun in the spring on a new Breck plant in Fort Madison, Iowa. Completion is scheduled for mid-1971. The output at Fort Madison will supplement that of the existing plant at West Springfield, Massachusetts.

Among the household products, PINE-SOL® cleaner-disinfectant-deodorizer showed a further gain in sales during the year, maintaining its No. 1 dollar sales position in the liquid cleaner category. FORMICA® FLOOR SHINE® finish, introduced during the first quarter of the year, met with very good acceptance. Cyanamid's polymer technology was important in the development of FORMICA FLOOR SHINE, which gives tile, vinyl, linoleum, and other similar types of floors a hard polymer finish that resists scuffs, stains, and spills.

As announced previously, Cyanamid had signed an agreement in October to acquire Elizabeth Arden Sales Corporation. This agreement predated an arrangement made by Eli Lilly and Company to buy Arden. Notwithstanding completion, in January 1971, of Lilly's acquisition of Arden, Cyanamid's suits for damages and other relief for failure to honor its prior agreement to buy Arden are proceeding.

Fibers: With the IRC acquisition at the end of 1969, Cyanamid became a multi-fiber producer, and during 1970 it significantly broadened its activities in the textile industry. Fiber products now produced by Cyanamid for the apparel and home furnishings markets include CRESLAN® acrylic fibers



Among Cyanamid's products for the home are PINE-SOL® liquid cleaner, FORMICA® FLOOR SHINE® finish, CRESLAN® acrylic carpet fiber, and FORMICA® brand laminates for such applications as kitchen cabinets, tables, walls, and counter tops.



Independence was one of 225 designs added to the line of SANITAS® and WALLCLAD® vinyl-coated fabric wall coverings during 1970.



Knit outerwear and accessories, such as winter-warming scarves and hats, are growth markets for CRESLAN® acrylic fibers.

and DY-LOK® solution-dyed rayon yarn. In addition, a range of high-tenacity rayon and polyester yarns is offered for industrial and tire uses.

Cyanamid's 1970 sales of acrylic fibers in the U. S. were below those of 1969, with selling prices down significantly. Sales to overseas markets were

about the same as a year ago. The principal factor in the domestic sales decline was softness in the carpet market, which reflected the decline in U. S. housing starts and tight money conditions. Prolonged inventory adjustments in the carpet industry affected sales of all carpet fibers, including the acrylics.

In the apparel area, CRESLAN acrylic fibers in 1970 achieved further penetration of the knit outerwear and accessories markets. Despite generally soft conditions, Cyanamid's 1970 domestic sales of acrylic fibers to the apparel market exceeded 1969 levels.

Cyanamid's customers were assisted during 1970 in developing new product lines utilizing the unique features of CRESLAN carpet fibers which make possible piece-dyed and cross-piece-dyed effects. The new carpet application facility installed in the CRESLAN fiber plant near Pensacola, Florida, was completed in the fourth quarter of the year and has already assisted in accelerating the development of new fiber products.

To meet an expected upturn in consumption of acrylic fibers, Cyanamid late in 1970 began another sizable expansion of the CRESLAN fiber plant. The new facilities are scheduled for completion in the latter half of 1971.

Cyanamid's sales of fiber products for industrial uses were adversely affected in 1970 by strikes in the rubber, automobile, and trucking industries. Long-term prospects remain favorable, and consistent with long-range plans, polyester tire yarn capacity at Painesville, Ohio, is being expanded, with the new facilities scheduled for completion in late 1971 and early 1972.

Efforts are being increased to accelerate introduction of new I R C polyester industrial products now under development.

Formica Corporation: In the United States, sales of the FORMICA® brand laminates, SANITAS® and WALLCLAD® wall coverings, FIAT® shower and laundry components, and other specialty building products marketed by Formica Corporation were lower in 1970 than in 1969, chiefly because of the slump in new home building, re-

duced commercial construction, and lower selling prices.

Despite the decline in domestic sales, Formica in 1970 broadened its position as a major producer of laminate-surfaced panel systems. Panel System 202, a moisture-resistant paneling for areas of high humidity such as bathrooms, met with increasing acceptance for residential and commercial remodeling. In addition, Formica obtained a Class I fire rating on its new Panel System 101, which expanded the potential of all panel systems for use in high-rise buildings as a surfacing for corridor walls, elevator cars, and the like.

During the year, new one-piece FIAT® modular tubs and tub-shower combinations were successfully test-marketed in several color selections. These attractive and functional units, the first to employ the technology of thermoforming with Cyanamid's ACRYLITE® acrylic plastic, represent a highly practical new concept in modular bathroom fixtures.

Further progress was made in laminate design with the development of new textured—or "low relief"—three-dimensional surfacing for general application in residential and commercial construction. Two slate designs introduced in mid-1970 achieved substantial sales, and several additional deep-etched, embossed, and debossed designs were introduced early in 1971.

To aid in meeting increased demand for SANITAS® and WALLCLAD® wall coverings and to provide manufacturing flexibility, new facilities for production of these materials were installed at Hughestown, Pennsylvania. The new installation was placed in partial production during the latter half of the year, and it will reach full-scale operation early in 1971. Production at the new location supplements that at Buchanan, New York. During 1970, 225 new designs were added to the SANITAS and WALLCLAD lines, with a substantial number of additional designs planned for 1971.

Late in the year, Formica Corporation announced its decision to withdraw from the industrial laminates business and to close its Winton Place plant in Cincinnati. The indus-

trial business—consisting chiefly of the production and sale of molded components for the textile industry, copper-clad materials used in printed circuitry, and special grades of laminates for mechanical and chemical applications—accounted for less than 15% of Formica Corporation's total sales and had been unprofitable in recent years. Continued operation of this plant would also have required the installation of pollution-control equipment which could not be economically justified. Attempts to sell the industrial operation, in order to keep it a viable enterprise, were unsuccessful. The decision leaves Formica free to place fuller emphasis on its primary objective—the development and marketing of quality products for home building, commercial construction, and the furniture industry.

Medical

	1970	1969
Worldwide Sales (\$ millions)	\$243	\$231
% Total Sales (approx.)	21%	21%
% Total Earnings (approx.)	36%	37%

Cyanamid's medical products include the well-known Lederle line of pharmaceuticals and biologicals, Davis & Geck surgical sutures and hospital specialties, fine chemicals and pharmaceutical intermediates, and a line of reagents and diagnostic products for clinical laboratories. The company's medical business was broadened to include the laboratory services themselves this year by acquisition of a small clinical laboratory.

Cyanamid's worldwide medical sales were higher in 1970 than in 1969. While domestic sales were about the same as a year ago, there was a significant sales increase overseas, in part reflecting continued growth in the acceptance of MYAMBUTOL® ethambutol, the antituberculosis drug introduced by Cyanamid in 1967.

Earnings in the medical segment

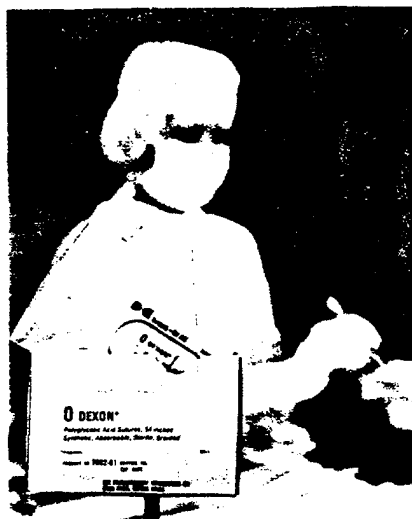


Lederle pharmaceuticals, color-coded and brightly labeled for easier identification, include STRESSTABS® 600 nutritional supplement and ALPEN® ampicillin trihydrate for oral suspension, both new in 1970, as well as antibiotics like ACHROMYCIN® tetracycline.

were somewhat lower than in 1969 as a result of lower selling prices for some of the medical products and continued rising costs of doing business.

In a major marketing move in mid-September, the U.S. selling prices of ACHROMYCIN® and ACHROMYCIN V® tetracycline tablets and capsules were

reduced to levels which made these products competitive in price with generic tetracyclines. The price reduction put physicians and pharmacists in a better position to provide patients with Lederle's high-quality ACHROMYCIN products, which have been the standard of the industry



DEXON® sutures, introduced in England in 1970 and in the U.S. and Canada in 1971, are the first wholly synthetic absorbable sutures.

since the introduction of the tetracycline antibiotics. The resulting increase in unit volume has exceeded expectations.

Several new products were introduced during the year. In July, DEXON® sutures, the first wholly synthetic sutures which are completely absorbable by the body, were produced and made available in England, where they are meeting with excellent acceptance. The strength, absorbability, and reduced tissue irritation of these sutures are expected to favor their use in a wide range of surgical procedures. They were cleared for use in Canada in June, and in November the Food and Drug Administration approved their production and sale in the United States. Introduction in the U. S. and Canada began early in 1971, and the sutures will be made available to physicians in additional markets abroad in succeeding months.

FLU-IMUNE® ultra-purified influenza vaccine was introduced in July. This product substantially reduces possible swelling and tenderness after injection. It is made by a sophisticated process which removes unwanted protein material known to cause reactions in some individuals.

STRESSSTABS® 600 nutritional supplement, formulated to provide the



Research on the molecular structure of crystals aided in development of the new broad-spectrum antibiotic, MINOCIN® minocycline.

physician with a new and significantly more potent preparation for combating certain vitamin deficiencies associated with physiologic stress, was introduced in April. This type of stress can accompany convalescence, fractures, wound-healing, and burns. STRESSSTABS 600 is a unique formulation of vitamins C, E, and B complex, and its introduction has resulted in an increased market share for Lederle vitamins.

Following appropriate clearances, Lederle's newest broad-spectrum antibiotic, MINOCIN® minocycline, will be introduced abroad during the first half of 1971. Marketing in the U. S. awaits Food and Drug Administration clearance. MINOCIN is distinguished by its activity against certain strains of bacteria which are resistant to other antibiotics. Developed over an eight-year period, this high-potency, semisynthetic tetracycline represents the fourth generation of important broad-spectrum antibiotics discovered by Lederle, beginning with AUREOMYCIN® chlortetracycline.

Progress was made during the year in broadening Cyanamid's medical business to include electromedical devices and diagnostic and other medical services. In June, Cyanamid entered into an agreement to cooperate

with ESB Incorporated in the development, manufacture, and sale of electronic cardiac pacers and other electromedical devices, and animal studies with two types of improved pacers are now in progress. In November, Cyanamid purchased Chem Lab Corporation, with clinical and diagnostic laboratories in Dade County, Florida, and Columbus, Ohio.

At the end of 1970, the final outcome of government moves to decertify a number of Lederle's combination drug products was still uncertain. Four of these products are considered important in their contribution to sales—ACHROCIDIN® tetracycline-antihistamine-analgesic compound, ACHROSTATIN® tetracycline and nystatin, DECLOSTATIN® demeclocycline and nystatin, and ARISTOMIN® steroid-antihistamine. Many years ago, before marketing of these four products began, each of them was approved by the Food and Drug Administration, and in the years since these approvals were given, many thousands of physicians have prescribed these products for millions of patients.

The moves toward decertification result from a review by the Food and Drug Administration of the efficacy and safety of all prescription pharmaceutical products which had been approved by it after 1938 and prior to enactment of the Drug Amendments of 1962. The four Lederle products named above were ruled to lack substantial evidence of effectiveness as combinations, even though their principal therapeutic components have been found "effective" by the FDA and no question has been raised as to their safety.

Cyanamid feels that the FDA moves with respect to these products are unjustified. It has filed objections to the FDA rulings, and the products remain on the market while these objections are under consideration. Should the final outcome be removal of any of them from the market, it is difficult to assess the financial impact on the company, since increased prescription of the individual ingredients would probably result and would to some extent cushion the effects of decertification.

Agricultural

	1970	1969
Worldwide Sales (\$ millions)	\$228	\$196
% Total Sales (approx.)	20%	18%
% Total Earnings (approx.)	16%	11%

Cyanamid's products for agriculture fall into three broad groups: animal industry products, pesticides, and fertilizers. Specialties are important in both the animal industry and the pesticide groups.

Cyanamid's worldwide agricultural

sales and earnings in 1970 rose significantly above the levels of 1969, with animal industry products leading the advance in the U. S. Pesticides contributed strongly in both the domestic and overseas markets.

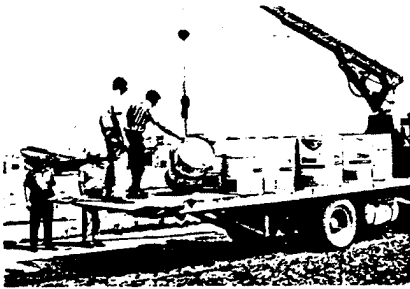
A major part of the animal industry product group consists of medicated feed supplements. Cyanamid's line of these supplements is based largely upon the broad-spectrum antibiotic AUREOMYCIN® chlortetracycline. The principal product in this line, AUREO S-P® 250 medicated feed premix for swine, continued as the world's leading antibiotic feed supplement during 1970, with sales substantially exceeding last year's record-breaking level. To meet the increasing demand for

this and other AUREOMYCIN products, a new feed-grade chlortetracycline fermentation unit is being built at Hannibal, Missouri. The new unit, which will come on stream in 1972, will expand Cyanamid's U. S. production capacity for feed-grade AUREOMYCIN by more than 25%. It will further augment production expansions which have already been accomplished over the past two years at the Willow Island, West Virginia, and Pearl River, New York, plants.

Although antibiotic feed supplements have been in use for nearly two decades, some concern has been expressed that their use might lead to the development of antibiotic-resistant bacteria, thus posing a threat to



Animal industry products include AUREO S-P® 250 premix for swine, the world's leading antibiotic feed supplement.



CYTHON® insecticide, one of Cyanamid's non-persistent pesticides, was widely used in mosquito control programs.

public health. Extensive research in our laboratories and elsewhere, as well as the experience of livestock and poultry producers with millions of animals, continues to provide assurance of the safety and effectiveness of these products. During the year a symposium was held by the New York Academy of Sciences at which the

available scientific data were extensively reviewed, and the general consensus was that there is no firm evidence pointing to any hazard to public health. Modern animal agriculture requires the use of antibiotic-containing feeds in order to make possible economical and abundant meat supplies for a growing world population.

Sales of dicalcium phosphate and ground limestone, added to the animal feed line through the acquisition of Sargent Calcium Co. in 1969, showed substantial increases in 1970. To aid in meeting the growing demand, work was begun on new dicalcium phosphate units scheduled for completion in mid-1971 in the Welland plant at Niagara Falls, Ontario, Canada, and in early 1972 at Hannibal, Missouri.

TRAMISOL® levamisole hydrochloride, a broad-spectrum anthelmintic to control the intestinal parasites of

farm animals, captured a significant share of the U. S. cattle anthelmintic market during 1970, the first full year in which this product has been on the domestic market. Food and Drug Administration clearance for use in sheep was obtained late in 1970, and applications have been made for swine clearances. This dewormer has achieved excellent market penetration in Latin America, where Cyanamid introduced it in 1967. Construction of additional production facilities, scheduled for completion in mid-1971, began last year at Bound Brook, New Jersey.

In the important pesticides part of the business, sales rose moderately in the U. S. and substantially abroad. The gain in the U. S. was paced by the further progress of THIMET® soil and systemic insecticide, which achieved record sales in 1970 as a result of its demonstrated performance in controlling the corn rootworm. While rather light insect infestations during the latter part of the year in the U. S. reduced the total usage of many pesticides, CYGON® systemic insecticide and CYTHON® insecticide, Cyanamid's premium-grade malathion, maintained favorable market positions. It should be noted that these are all non-persistent insecticides, and we anticipate that their sales will benefit, both in the U. S. and abroad, from the increasingly stringent restrictions on uses of so-called "hard" insecticides.

Expanded and improved facilities for the manufacture of CYGON in the Warners plant at Linden, New Jersey, were placed in operation early in the year. Significant improvements are being achieved in manufacturing costs, and prices have been reduced in order to further expand the growing market opportunities for this insecticide.

Outside the U. S., the principal contributor to the strong sales gain for pesticides was malathion insecticide. CYOLANE® systemic insecticide, used for control of the cotton leafworm in the Middle East, and CYCOCOL® plant growth regulant also turned in good performances.

Because of changes in market conditions, sales of parathion insecticides were discontinued during the year, and it was decided not to rebuild the *para*-nitrophenol plant at Willow



On Cyanamid-owned ranch in Florida, cattle receive regular doses of TRAMISOL® levamisole hydrochloride, effective in controlling intestinal worms in farm animals.

*Trademark

Island, West Virginia, which produced intermediates for parathion and which was severely damaged by an explosion late in 1969. The investment in the plant in excess of amounts recovered from insurance was charged against depreciation reserves, and there was consequently little adverse effect on current earnings.

For fertilizer products, Cyanamid's worldwide sales for 1970 were well above those of a year ago. Sizable gains in the U. S. and Canada much more than offset a decline in export sales to overseas markets. Unfavorable ocean freight rates combined with worldwide overcapacity have significantly reduced U. S. participation in the overseas fertilizer markets.

Here at home, favorable weather conditions, coupled with improved grain prices, resulted in a 7% to 8%

increase in fertilizer consumption for the year. The increased volume, plus production curtailments in the industry, improved the fertilizer supply-demand balance, and the first signs of a turnaround in prices have appeared in the marketplace. Despite the improvement, however, results from the fertilizer business are still unsatisfactory.

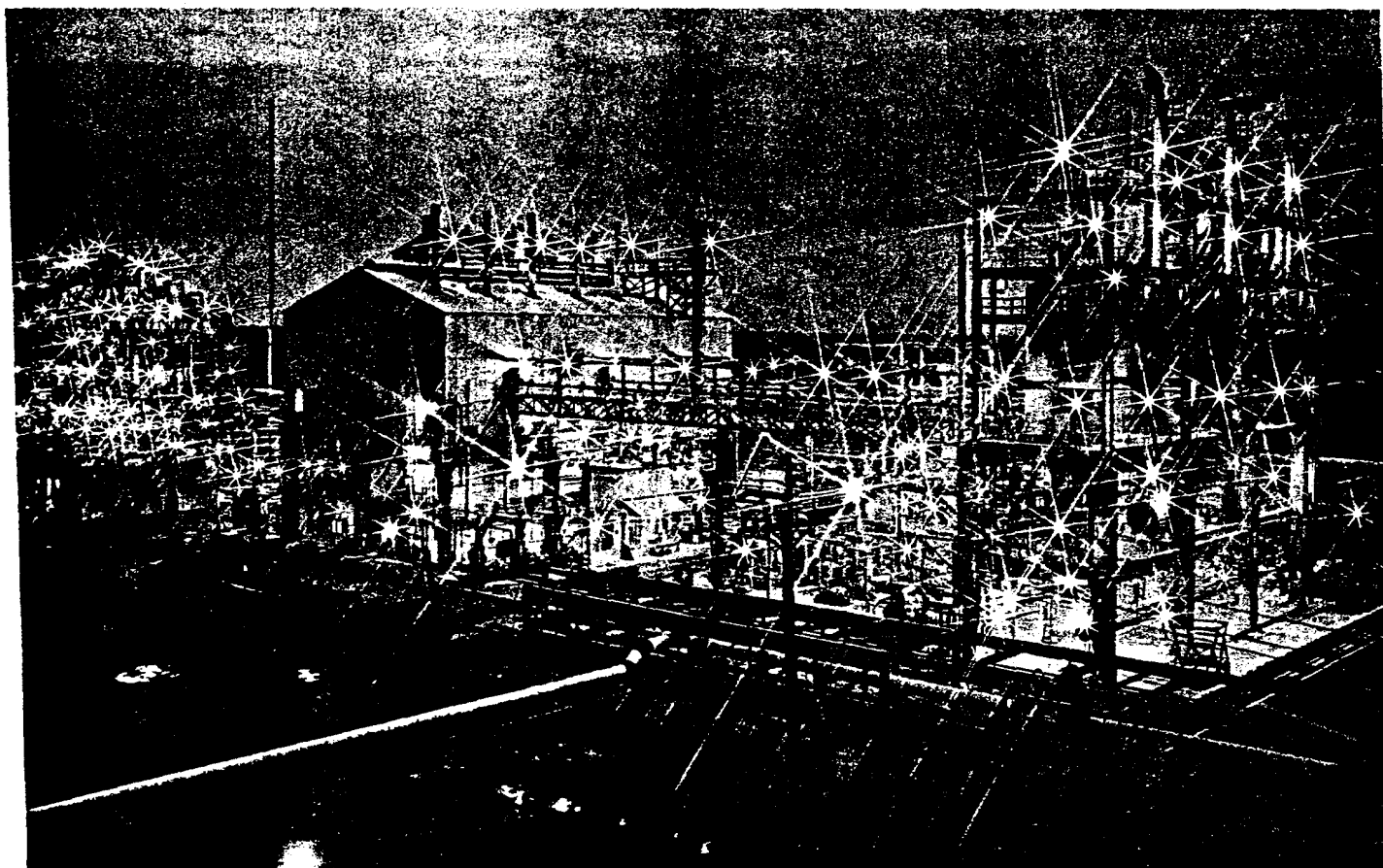
Late in the year, Cyanamid entered a new agricultural business area—commercial farming. Through subsidiaries, Cyanamid and John Hancock Mutual Life Insurance Company purchased 35,000 acres near Englehard, North Carolina, to be used for the production of feed grain. This land will be cleared at the rate of 7,000 acres per year, so that full crop production will be reached in 1976. It will be operated under the name Mattamuskeet Farms.

Chemical

	1970	1969
Worldwide Sales (\$ millions)	\$373	\$382
% Total Sales (approx.)	32%	35%
% Total Earnings (approx.)	21%	25%

In chemicals, Cyanamid manufactures a wide variety of upgraded specialty products which it markets to a broad spectrum of industries. Large-volume commodity chemicals are generally produced only where needed in significant quantities as raw materials for the specialty products.

Worldwide chemical sales in 1970 were somewhat lower than in 1969.



New Savannah chloride-process plant, completed in 1970, increased capacity for producing UNITANE® titanium dioxide pigments.

Chemical sales showed a good increase outside the U. S., but the rise was not sufficient to offset a domestic decline, which reflected the slowdown in the U. S. economy.

Earnings in the chemical segment were significantly below the 1969 level. Although selling prices were generally stable, earnings were affected by the decline in volume and by greater pressure on profit margins resulting from inflationary increases in the costs of doing business.

A number of new or expanded chemical plant facilities, designed to lower manufacturing costs through use of improved production processes and increased throughput, were under construction or completed during 1970. Erection of a large new chloride-process titanium dioxide plant at Savannah, Georgia, was completed and the plant was placed in commercial operation during the fourth quarter. This facility has provided a significant increase in capacity for UNITANE® titanium dioxide, a white pigment of high opacity, which should permit greater penetration into the paint, paper, printing ink, and plastics industries.

To provide an additional source of raw materials for titanium dioxide,



Farmer Electric Products Co., Inc., acquired in 1970, makes photoelectric controls which are used by the Decision Making Systems Department.

Titanium Enterprises, a joint mining venture with Union Camp Corporation, was formed in August. This venture will provide Cyanamid with an additional source of titanium minerals from Union Camp's property in northern Florida and reduce dependence on imported ores for production of titanium dioxide. Engineering of the facilities and mine-site development are now in progress, with initial production scheduled for mid-1972.

Also in the pigments area, a major expansion of azo pigment facilities was completed at Bound Brook, New Jersey, late in the year and is now in start-up. This installation will be one of the first of its type to utilize a computer to operate and control the chemical reactors in which the colored pigments are produced.

New facilities at Willow Island, West Virginia, begun early in the year and scheduled for completion in 1971, will allow Cyanamid to continue as the largest U. S. manufacturer of iron blue pigment, used for printing inks and carbon paper. The raw material for iron blue pigment is yellow prussiate of soda, and new facilities for the manufacture of this material, utilizing a more efficient production process, are being constructed at the Fortier, Louisiana, plant complex to replace obsolete facilities in the Warners plant at Linden, New Jersey.

In order to better serve the growing Southern textile industry, construction was begun during the year on a large new textile chemicals plant at a new site in Charlotte, North Carolina, to replace an older plant which could not be expanded because of space limitations. A new sales office and distribution center will also be built on the same site. Completion of the combined facilities is scheduled for late 1971 and early 1972.

To aid in meeting growing demand, a substantial expansion of manufacturing facilities for rubber accelerators is under way at the Bound Brook plant and is scheduled for completion by mid-1971. Concurrently, a Claus sulfur-recovery unit is also being installed for operation beginning late in 1971 to eliminate hydrogen sulfide emissions from various rubber chemicals production operations.

Several projects were undertaken to further improve Cyanamid's service to the paper industry. New alum plants were put into operation at Escanaba, Michigan, and DeRidder, Louisiana, early in 1970. This increases the total number of such plants to fourteen. Construction was begun late in the year on expanded production facilities for paper chemicals, particularly PAREZ® 630-NC resin, at Kalamazoo, Michigan, to serve Michigan and Wisconsin markets. This new resin, which imparts both wet strength and dry strength to paper, continues to experience rapid sales growth.

A number of Cyanamid's chemical product groups are important in combating pollution. One such group is the desulfurization catalysts used by the oil refining industry. These catalysts make possible the removal of sulfur from various refinery streams and from fuel oil, and they play a significant role in control of sulfur dioxide emissions from oil-burning installations. In anticipation of large growth in demand for these products, Cyanamid's production capability is being expanded by installation of a major new facility at Azusa, California. Facilities for production of these catalysts are also being installed in the Welland plant at Niagara Falls, Ontario, Canada, and planning is well advanced for production in Japan. These expansions follow capacity additions during 1970 in Cyanamid's facilities at Fort Worth, Texas, and Michigan City, Indiana.

Another Cyanamid product group with an important role in pollution control is the polyacrylamide flocculating agents, and construction of a new facility for producing these materials is under way in the Warners plant at Linden, New Jersey. Especially rapid growth is forecast for them in water and waste treatment owing to increasingly stringent regulations requiring reduction in stream pollution caused by mining, manufacturing, and municipal wastes. The new plant will begin operations in mid-1971.

During the year Cyanamid intensified its research and development work on catalysts for the reduction of



R. G. Keppler, manager of the Refinery Chemicals Department, holds sample of Cyanamid auto exhaust catalysts. Plants producing other catalysts are undergoing expansion.

pollution from automobile exhausts. The company has considerable background and technology in this area, and there are strong indications that the market for such catalysts could become very substantial over the next few years. Cyanamid is hopeful that it will be able to capture a significant share of this business.

In June Cyanamid acquired Farmer Electric Products Co., Inc., of Natick, Massachusetts. This company produces a line of photoelectric controls, magnetic proximity devices, and control logic modules which are used extensively in the materials-handling systems sold by the Decision Making

Systems Department. Cyanamid established this department two years ago to design and market luminescer-based systems for the control of automated industrial operations and for use as peripheral equipment in electronic data processing.

Late in the year, the company announced plans to close its titanium dioxide plant at Piney River, Virginia, in June 1971. The plant, which is small and obsolete, is no longer economic. Moreover, local ore reserves are dwindling, and substantial capital expenditures for environmental controls would have been required if operation of the plant were continued.

International

Cyanamid's 1970 sales outside the United States and Canada again reached record levels. Sales in these international markets, exclusive of sales by associated companies, were \$229,132,000, up 11% from the 1969 level. These sales in 1970 accounted for 20% of the Cyanamid total.

As previously mentioned, medical products, agricultural products, and chemicals were all important contributors to the sales increase in the international markets. Among the medical products, MYAMBTOL® ethambutol met with further acceptance by the medical profession for the treatment of tuberculosis. In the agricultural group, pesticides made a strong showing, and sales of RIPERCOL® tetramisole, the antiparasitic veterinary drug, broadened in Latin America with the introduction of the injectable form for cattle in additional markets. RIPERCOL is marketed in the United States under the TRAMISOL trademark. The availability of Cyanamid's manufacturing facilities in the Netherlands for acrylamide and various specialties was a factor in the sales gain for chemicals.

An important additional part of Cyanamid's activities overseas is conducted through several associated companies in which Cyanamid's interest is from 40% to 50%. In 1970, total sales of these companies were approximately \$124,000,000, as compared with \$121,000,000 in 1969.

The operating earnings from the international business in 1970 were higher than in 1969. However, total earnings in 1969 were higher because of a non-recurring payment in settlement of certain foreign patent litigation which was received in that year.

During 1970 Cyanamid completed a new Veterinary Research Center at Porto Alegre, Brazil. Work at the new center will be devoted to developing anti-tick and other health products for animals in tropical areas. The installation was inaugurated in August at an open house for more than 500 Brazilian veterinarians.

In the fourth quarter, work began near Madrid, Spain, and in Catania, Italy, on the relocation and expansion

of production facilities for medical and agricultural products. In Lyon, France, facilities are under construction for expanded production of medical products.

Also in the fourth quarter, to meet rising demand, Cyanenka S. A. of Barcelona, Spain, an associated company owned 40% by Cyanamid, began construction of facilities to increase its productive capacity for acrylic fibers. The expansion is the third since Cyanenka began production in 1967. The new facilities are scheduled to go on stream during the first half of 1972.

A rubber chemicals plant under construction at Altamira, Mexico, by Cyanaquim, S. A. de C. V., another associated company in which Cyanamid's interest is 40%, is expected to be completed early in 1971.

Canada

Sales in Canada in 1970 were somewhat higher than in 1969. Strong performances in the agricultural and medical parts of the business more

than offset some softness in fibers and building products.

In addition to the expansions of facilities to produce desulfurization catalysts and dicalcium phosphate, mentioned earlier in this Annual Report, work was begun during the year on construction of a new xanthate unit in the Welland plant at Niagara Falls, Ontario. The new unit, which will use an improved production process, will supply Cyanamid's worldwide requirements of xanthates, used in the mining industry for mineral beneficiation, and it will replace existing units in the Welland plant and in the Warners plant at Linden, New Jersey.

As part of a broad program to delete unprofitable business segments, Cyanamid withdrew during 1970 from the manufacture and sale in Canada of molded plastic products and explosives. Cyanamid will continue, however, to supply these important industries with raw materials.

During the year, a semi-commercial plant for the production of phosphine and phosphine derivatives began operation in the Welland plant. This installation is developing flame re-

tardants and stabilizers for plastics and textiles. It is expected to aid Cyanamid materially in deriving commercial benefit from many years of research on phosphorus compounds.

Residential and Commercial Construction

After intensive study, Cyanamid decided that it should enter the residential and commercial construction field—a \$35-billion industry with exceptional growth prospects—and The Ervin Company, a developer of residential communities in the Southeast, became a wholly owned subsidiary of Cyanamid in September. Terms included an initial exchange for the Ervin shares of 487,805 shares of Cyanamid common stock plus future payments, contingent upon future earnings of Ervin, of up to the same number of shares of Cyanamid common.

In December Cyanamid purchased Sunstate Builders, Inc., a residential developer in the Tampa, Florida, area, for cash. Sunstate is operated under the direction of Ervin.

For accounting purposes, the acquisition of Ervin will be treated as a pooling of interests. The sales of both subsidiaries are unconsolidated, and the earnings are accounted for on an equity basis. The 1970 sales and revenues of the real estate subsidiaries were \$39,455,000, with earnings of \$2,299,000.

Despite weakness in the home-building industry, Ervin's operating results in 1970 reached record levels, with earnings significantly higher than in 1969. In large measure, Ervin's success over the years has been due to planning for a better residential environment and to improvements in the efficiency of the company's building operations. Cyanamid intends to fully support Ervin's efforts to develop new and better approaches to residential development, and hopes to bring the multi-faceted industrial and research capabilities available within Cyanamid to bear on the development of new products and systems which will contribute to the



President C. D. Siverd and Manuel Espinosa Yglesias, President of Banco de Comercio (center), inspect rubber chemicals plant being built by Cyanaquim, S.A. de C.V., near Tampico, Mexico. With them, from left, are R. J. Ephrussi and R. A. Schoellhorn, Cyanamid International, and A. Petrinovic, Cyanaquim.

efficiency of the building process. In addition, continuing expansion into other geographic areas is planned.

Domestic Associated Companies

Although sales and earnings of Jefferson Chemical Company, Inc., owned jointly with Texaco Inc., were slightly lower in 1970 than the year before, 1970 brought progress in several areas. A specialty amines unit in the plant at Conroe, Texas, started up smoothly in April and was operating in excess of design capacity within one month. Significant increases were realized in sales of several proprietary urethane polyols used in rigid foam applications. At the Port Neches, Texas, plant a substantial improvement in ethylene productivity was accomplished by reducing coke formation, and this process improvement is being offered for license.

Despite the slowdown in the U. S. economy, sales and earnings of Arizona Chemical Company, owned jointly with International Paper Company, rose substantially in 1970. As a part of a continuing program by Arizona to upgrade its raw materials, construction was begun during the year on a 25,000,000-pound-per-year terpene resin unit, scheduled for completion in mid-1971, in the plant at Panama City, Florida. Terpene resins, used as tackifiers for pressure-sensitive tapes, masking tapes, hot-melt coatings and adhesives, laminating adhesives, rubber-solution adhesives, and wax-saturation compounds, are made from chemicals recovered from crude sulfate turpentine, a by-product in the production of kraft pulp.

In July, Cyanamid sold its 49% interest in Southern Minerals Corporation, Southern Pipeline Corporation, and Southern Petroleum Corporation. The operations of these companies in the production, transportation, and sale of oil and gas were profitable, but as relatively small independents they had limited opportunities for growth, and it was felt that Cyanamid's resources and energies could be better employed in other business areas.



Classes in job-related educational program at Bound Brook plant are part of a company-wide effort to hire, train, and retain disadvantaged men and women.

Public Affairs and Employee Relations

As society becomes increasingly concerned with the quality of life, corporations are judged by much more than their financial statements. Cyanamid continues to discharge its obligations as a corporate citizen, directing its efforts particularly into those areas in which it can contribute most effectively.

One of these areas is pollution control, where the company has two broad objectives—minimizing pollution in its own operations and developing and supplying products useful in the pollution-control programs of others. Preceding sections of this Annual Report contain references to some of the more significant steps toward achieving these objectives taken by Cyanamid during 1970.

In its continuing support of higher education, Cyanamid again made awards during the year to colleges and universities with which it maintains close relations, focusing primarily on departments of chemistry and chemical engineering. In addition, the company continued its sup-

port of health and welfare organizations, especially in communities where it carries on its operations.

Every Cyanamid location in the U. S. has a program of affirmative action in the hiring of people from minority groups. During the year, recruitment efforts on the campuses of predominantly black colleges and universities were stepped up, and a further increase in these efforts is planned for 1971.

In addition, as a participating member of the National Alliance of Businessmen, the company in 1968 set itself the goal of employing, by mid-1971, 500 men and women from the ranks of the disadvantaged. As of June 30, 1970, there were 477 such employees on the payroll—26% over the target for that date, and only 23 employees below the goal for mid-1971. As indicated earlier, the economic slowdown in the U. S. is making pursuit of this program increasingly difficult.

Initially, the retention rate among employees hired under this program was disappointing. This rate improved significantly in 1970, reflecting increased effort in the orientation, basic



Land reclamation techniques pioneered by Cyanamid transformed Florida phosphate mine sites into municipal recreational parks and an 18-hole public golf course.

education, and counseling of trainees, combined with special training for their supervisory personnel.

To all employees, Cyanamid has made clear that safety takes precedence over production schedules, and it is gratifying that the number of disabling injuries per million man-hours worked in Cyanamid fell to 1.35 in 1970 from 1.49 in 1969. The comparable figure for all companies belonging to the Manufacturing Chemists Association was 3.59 for 1969, and for all U. S. manufacturing companies it was 8.08.

The severity of the Cyanamid accidents declined also. In 1970, there were 360 days lost per million man-hours worked, as compared to 799 in 1969, and there were two fatalities in 1970 against six in 1969. Even two fatalities, however, are too many, and it is distressing that there have already been two fatalities in 1971.

In the area of labor relations, negotiations were completed during 1970 with 26 U. S. union locals. The year brought no significant work interruptions at any Cyanamid location inside or outside the U. S.

Litigation

During 1970, the U. S. Court of Appeals in New York reversed the

1967 antitrust conviction of the company and two other drug companies involving broad-spectrum antibiotics and ordered a new trial. The Government has petitioned the Supreme Court for further review.

The 154 treble damage suits against the three defendant companies and two other drug companies which grew out of the Government's antitrust charges are in various stages of settlement or litigation.

Sixty-six suits, involving the claims of almost all states, counties, cities, consumers, wholesalers, and retailers, have been settled for approximately \$85 million, Cyanamid's share being approximately \$34 million. The settlement sum was placed in escrow by the defendants in October 1969, pursuant to court order implementing the settlement proposal. The settlement was approved as fair and reasonable by the U. S. District Court in New York on June 24, 1970. A few retailer and wholesaler class members have appealed.

The separate settlement proposal of \$32.5 million (of which Cyanamid's share is approximately \$13 million) for private hospitals and Blue Cross plans has been accepted by all Blue Cross plans and by almost all the private hospitals. The U. S. District Court in New York has scheduled a hearing

on February 19, 1971, to consider final approval of the settlement.

As of September 30, 1969, the company had accrued \$54 million to cover its share of the settlement proposals, plus certain legal expenses. The accrual, less an estimated tax benefit of \$29.4 million, was charged against earnings of appropriate prior years. The company's share of the escrow deposit referred to above was charged against the accrual.

The principal plaintiffs and classes represented in the 61 non-settling cases (some of which allege substantial amounts of damages) are the states of California, Hawaii, Kansas, North Carolina, Oregon, Utah, and Washington and the consumers they purport to represent, health benefit and insurance organizations which allegedly reimbursed individuals, purchasers of animal feed and veterinary products, competitors, the U. S. Government, and the governments of Kuwait and Vietnam. These cases have been assigned for coordinated pre-trial discovery to a single judge, who had indicated that he expects the cases to be ready for trial by September 1971.

Due to the uncertainty necessarily inherent in litigated matters of this sort, the eventual cost of this litigation to the company, and its ultimate disposition, cannot be accurately predicted. However, the company believes, on the basis of information and advice presently available, that any additional liability with respect to this antitrust litigation will not have a material adverse effect upon the consolidated financial position of the company and its subsidiaries.

On December 16, 1970, the Supreme Court of the State of New York approved the settlement of the stockholder's derivative action against certain past and present directors and officers alleging breaches of fiduciary duties in connection with the alleged violations of the antitrust laws referred to above. The settlement stipulation acknowledged that after a full investigation plaintiff had found no evidence of any breaches of such duties. A judgment implementing the settlement and dismissing the suit was entered on January 4, 1971.

GEORGE W. RUSSELL
Executive Vice President

CONSUMER PRODUCTS, *Albert L. Munsell, General Manager*—BRECK® preparations for care of the hair, PINE-SOL® cleaner, disinfectant, deodorizer, FORMICA® FLOOR SHINE® finish, and other household maintenance, cleaning and laundering aids.

FIBERS, *Philip G. Connell, Jr., General Manager*—CRESLAN® acrylic fiber for apparel, home furnishings and industrial applications; filament rayon, filament polyester for tire cord and industrial applications; Dy-Lok® solution-dyed filament rayon for upholstery, drapery and apparel fabrics.

FORMICA CORPORATION, *Wallace G. Taylor, President and General Manager*—FORMICA® brand decorative laminates; laminate cabinet surfacing; laminate-clad doors and toilet compartments; laminated furniture vinyl; architectural and residential panel systems; adhesives, laminate cleaner; FIAT® shower floors, laundry tubs, toilet compartments and tub showers; SANITAS® and WALLCLAD® vinyl-coated wall coverings from Standard Coated Products.

JAMES F. BOURLAND
Vice President

AGRICULTURAL, *James G. Affleck, General Manager*—animal feed supplements and veterinary products, insecticides, fungicides, herbicides, nitrogen and phosphate fertilizer products, blended fertilizers.

LEDERLE LABORATORIES, *Borden R. Putnam, General Manager*—antibiotics, steroids, biologicals, pharmaceuticals, vitamins and hematinics, vaccines; clinical laboratory diagnostic aids, fine chemicals and bulk pharmaceuticals; Davis & Geck surgical sutures and hospital specialties, including dressings, germicides and scrub sponges; clinical laboratories.

ERNEST G. HESSE
Vice President

CYANAMID INTERNATIONAL, *Harry F. Bliss, Jr., Managing Director*—produces or imports and markets the company's products through subsidiaries and distributors in countries and territories outside the United States and Canada.

CYANAMID OF CANADA LIMITED, *Ben H. Loper, President*—produces or imports and markets in Canada the products of Cyanamid and its subsidiaries.

THOMAS P. TURCHAN
Vice President

INDUSTRIAL CHEMICALS AND PLASTICS, *Howard E. Nehms, General Manager*—industrial products for the paper making industry and mining industry; chemical agents and flocculants for industrial and municipal water and waste treatment. Chemical products for the chemical process industry; heavy chemicals, surfactants, acrylamide, acrylonitrile, melamine and specialty monomers; explosives. Plastics and resins for coatings, thermosetting and acrylic molding compounds, high performance bonding agents and adhesives, and ACRYLITE® acrylic sheet.

ORGANIC CHEMICALS, *Joseph A. Schmidlein, General Manager*—catalysts, dyes, elastomers, intermediates, plastic additives, refinery chemicals, rubber chemicals, textile chemicals, textile resins, industrial safety equipment from Glendale Optical Co., Inc.

PIGMENTS, *John Ludden, Jr., General Manager*—inorganic and organic chemical colors, UNITANE® titanium dioxide.

THOMAS P. FORBATH
Vice President

THE ERVIN COMPANY, *Calvin J. Harris, President*—residential and commercial construction.

CLIFFORD D. SIVERD, *President and Chief Executive Officer*
PERSONNEL, *Clair L. Brandrup, Director*
PUBLIC RELATIONS, *John M. Fasoli, Director*
THOMAS P. FORBATH, *Vice President*
COMMERCIAL DEVELOPMENT, *William D. Holland, Director*
ENGINEERING & CONSTRUCTION, *George P. Ferrigni, Director*
HAROLD B. GROSS, *Secretary and General Counsel*
LAW, *James I. Wyer, Director*

ROBERT C. SWAIN, *Executive Vice President*
CENTRAL RESEARCH, *John F. Flagg, Director*
GORDON C. WALKER, *Executive Vice President*
CONTROLLER'S, *J. Clifford Blauvelt, Controller*
PURCHASING, *Philip K. Langford, Director*
TRANSPORTATION & DISTRIBUTION,
Gerrit W. Van Schaick, Director
TREASURY, *Leonard T. Murphy, Treasurer*

Sales Volume—Consolidated sales in 1970 were \$1,158,440,000 compared with \$1,087,098,000 in 1969. Comparative quarterly sales for the two years were:

	1970		1969	
Quarter	Amount	% of Total	Amount	% of Total
First	\$ 298,701,000	26	\$ 270,554,000	25
Second	310,324,000	27	286,795,000	27
Third	273,698,000	23	264,951,000	24
Fourth	275,717,000	24	264,798,000	24
	<u>\$1,158,440,000</u>	<u>100%</u>	<u>\$1,087,098,000</u>	<u>100%</u>

Earnings—Pre-tax earnings (exclusive of extraordinary gain) for 1970 were \$151,175,401 compared with \$166,870,096 in the previous year. After provision for Federal and foreign income taxes of \$64,500,000, consolidated earnings (exclusive of extraordinary gain) for 1970 were \$86,675,401 compared with \$89,870,096 in 1969. Net Earnings for 1970 (including an extraordinary gain of \$4,850,526) were \$91,525,927. Per share earnings for 1970 amounted to \$1.93 (exclusive of extraordinary gain of 11¢) and \$2.04 (including extraordinary gain) compared to \$2.02 in 1969 based on the average number of shares of common stock (excluding treasury shares) outstanding for each year.

Comparative earnings with earnings per share by quarters for the two years were:

	1970		1969	
Quarter	Amount	Per Share	Amount	Per Share
First	\$26,070,000	\$.59	\$25,049,000	\$.56
Second	23,551,000	.53	23,523,000	.53
Third	23,562,000*	.51*	21,263,000	.48
Fourth	18,343,000	.41	20,035,000	.45
	<u>\$91,526,000*</u>	<u>\$2.04*</u>	<u>\$89,870,000</u>	<u>\$2.02</u>

* Including extraordinary gain of \$4,850,000 or 11¢ per share

The average number of shares (excluding treasury shares) outstanding for 1970 was 44,940,271 compared with 44,465,703 in 1969.

Provision for Federal and foreign taxes has been reduced by the amount of the current investment tax credit which has benefited both 1970 and 1969 earnings by 4 cents a share.

Capital Stock—As of December 31, 1970 there were 45,182,158 shares of common stock outstanding, compared to 44,693,628 shares outstanding at the end of 1969. This includes treasury stock of 312,204 shares at December 31, 1970 and 327,434 shares at December 31, 1969.

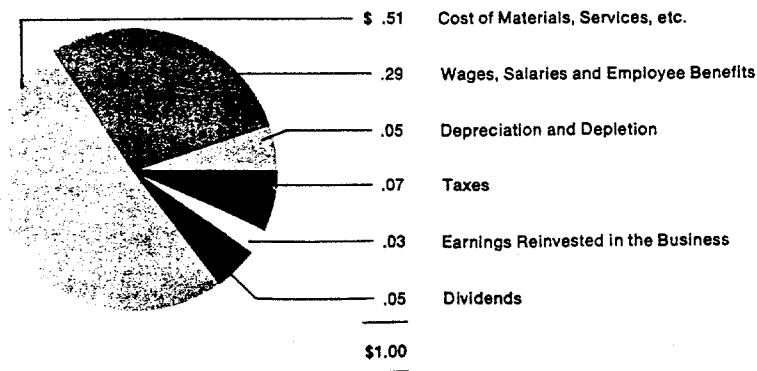
During the year the company purchased 152,574 shares of its common stock to be used for appropriate corporate purposes. A total of 34,182 shares of common stock held in its treasury was transferred on a restricted basis to employee participants in the company's Incentive Compensation Plan in the form of contingent allotments made in 1970. Another 15,267 shares of common stock were delivered in 1970 to retired participants in said plan. In June 118,355 shares of common stock were used to acquire the net assets of Farmer Electric Products Co., Inc., on a pooling of interests basis.

In September 487,805 shares of common stock were issued for the acquisition of The Ervin Company on a pooling of interests basis, subject to additional payments of up to 487,804 shares of Cyanamid common stock contingent upon future earnings of Ervin. During the year 725 shares of common stock were issued upon the exercise of options under the Employees' Stock Option Plan.

Dividends paid by Cyanamid in 1970 and 1969 were \$1.25 per share, amounting to \$55,378,000 and \$55,108,000 respectively.

Associated Companies—Cyanamid's investment in and advances to companies jointly owned (40% to 50%) are carried at cost. On July 15, 1970 all of the outstanding stock of Southern Minerals Corporation, Southern Pipeline Company and Southern Petroleum Corporation, 49% of which had been owned by Cyanamid, were sold to the Sun Oil Company, resulting in an extraordinary gain of \$4,850,000 or 11¢ per share. Cyanamid's equity in the 1970 earnings of the jointly owned companies amounted to \$11,058,000 and dividends received were \$9,680,000. This compares with its equity in 1969 earnings of \$9,887,000 and dividends received of \$10,351,000.

Allocation of 1970 Revenue Dollar



Year Ended December 31, 1970 in Comparison with the Year Ended December 31, 1969

	1970	1969
NET SALES	\$1,158,439,700	\$1,087,097,977
Dividends from associated companies, 40% to 50% owned	9,679,653	10,350,836
Equity in net earnings of unconsolidated real estate subsidiaries	2,299,185	—
Interest	2,511,114	3,482,967
Royalties and licenses	6,354,270	6,877,286
Other income—net	2,109,808	4,614,458
	<u>1,181,393,730</u>	<u>1,112,423,524</u>
Deduct:		
Manufacturing cost of sales—less depreciation and depletion	632,623,802	577,768,604
Selling and advertising expenses	195,206,113	175,776,831
Administrative and general expenses	58,349,279	57,628,983
Depreciation and depletion (Note 3)	58,513,790	54,834,159
Research and process development expenses	46,045,505	44,932,682
Interest charges on funded and other debt	8,066,785	6,137,914
Employees' benefits (Note 9)	31,413,055	28,474,255
	<u>1,030,218,329</u>	<u>945,553,428</u>
EARNINGS (exclusive of extraordinary gain) BEFORE TAXES ON INCOME	151,175,401	166,870,096
Provision for Federal and foreign taxes on income	64,500,000	77,000,000
EARNINGS EXCLUSIVE OF EXTRAORDINARY GAIN	<u>86,675,401</u>	<u>89,870,096</u>
Add:		
Gain arising from sale of an investment in associated companies—less related Federal income taxes (\$1,900,000)	4,850,526	—
NET EARNINGS	<u>\$ 91,525,927</u>	<u>\$ 89,870,096</u>
Earnings per share of Common Stock:		
Earnings exclusive of extraordinary gain	\$1.93	\$2.02
Extraordinary gain	.11	—
Net Earnings	<u>\$2.04</u>	<u>\$2.02</u>

THE BOARD OF DIRECTORS
AMERICAN CYANAMID COMPANY:

We have examined the consolidated balance sheet of American Cyanamid Company and subsidiaries as of December 31, 1970 and the related statements of earnings, earnings employed in the business, capital surplus and source and application of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying consolidated financial statements present fairly the financial position of American Cyanamid Company and subsidiaries at December 31, 1970 and the results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. Also, in our opinion, the accompanying consolidated statement of source and application of funds presents fairly the information shown therein.

New York, N.Y.
February 9, 1971

PEAT, MARWICK, MITCHELL & CO.

In consolidated financial statements
December 31, 1970 in comparison with December 31, 1969

	1970	1969
ASSETS		
CURRENT ASSETS:		
Cash in banks and on hand	\$ 40,194,334	\$ 43,065,515
Marketable securities and time deposits, at cost and accrued interest	9,182,171	12,489,575
Accounts receivable, less provision for doubtful accounts	189,559,911	183,752,002
Inventories, at lower of cost or market	206,233,986	190,378,133
TOTAL CURRENT ASSETS	445,170,402	429,685,225
INVESTMENTS AND ADVANCES:		
Associated companies, 40% to 50% owned—at cost (equity in net assets \$54,500,000; 1969, \$58,200,000)	34,966,447	40,781,287
Equity in net assets of unconsolidated real estate subsidiaries (Note 2)	15,755,447	—
Other investments and advances	13,207,383	5,379,815
TOTAL INVESTMENTS AND ADVANCES	63,929,277	46,161,102
PLANTS, EQUIPMENT AND FACILITIES, at cost:		
Land, including mining land	42,330,462	42,170,117
Buildings	217,501,911	209,112,440
Machinery and equipment	784,496,891	719,304,314
Uncompleted construction and installations	45,636,763	53,858,574
	1,089,966,027	1,024,445,445
Less accumulated depreciation and depletion	558,654,188	523,808,687
NET PLANT INVESTMENT	531,311,839	500,636,758
INTANGIBLES RESULTING FROM BUSINESS ACQUISITIONS	15,118,591	15,150,889
PREPAID EXPENSES AND DEFERRED CHARGES	10,397,519	9,238,119
	\$1,065,927,628	\$1,000,872,093

	1970	1969
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	\$ 107,474,205	\$ 112,189,526
Short term borrowings	31,710,417	15,421,247
Funded debt installments due within one year	5,890,929	5,871,803
Accrual for settlement of litigation	17,023,688	17,983,559
Provision for Federal and foreign taxes on income	23,338,382	8,058,573
TOTAL CURRENT LIABILITIES	185,437,621	159,524,708
FUNDED DEBT NOT DUE WITHIN ONE YEAR (Note 4)	116,996,355	118,993,967
INCENTIVE COMPENSATION CONTINGENTLY PAYABLE (Note 5)	4,098,813	4,290,194
INCOME TAXES PAYABLE IN THE FUTURE	22,700,000	22,000,000
MINORITY SHAREHOLDERS' EQUITY IN FOREIGN SUBSIDIARIES	5,898,849	5,233,488
SHAREHOLDERS' EQUITY:		
Common Stock—par value \$5 per share (Notes 6 and 10)		
Authorized—60,000,000 shares		
Outstanding—45,182,158 shares (1969—44,693,628 shares)	225,910,790	223,468,140
Capital surplus	21,087,657	20,563,114
Earnings employed in the business (Notes 1 and 7)	493,496,952	456,915,061
	740,495,399	700,946,315
Less cost of 312,204 shares of Common Stock held		
in treasury (1969—327,434 shares) (Note 8)	9,699,409	10,116,579
TOTAL SHAREHOLDERS' EQUITY	730,795,990	690,829,736
	\$1,065,927,628	\$1,000,872,093

Year Ended December 31, 1970 in comparison with the Year Ended December 31, 1969

	1970	1969
Balance at beginning of year	\$ 20,563,114	\$ 20,562,544
Premium on Common Stock issued under employees' stock option contracts	19,926	570
Adjustment arising from the issuance of Common Stock upon pooling of interests	504,617	—
Balance at end of year	<u>\$ 21,087,657</u>	<u>\$ 20,563,114</u>
Balance at beginning of year	\$456,915,061	\$424,152,106
Net Earnings for the year	91,525,927	89,870,096
Adjustment arising from the issuance of Common Stock upon pooling of interests less amount credited to Capital Surplus	3,261,620	—
	<u>551,702,608</u>	<u>514,022,202</u>
Deduct:		
Dividends on Common Stock—\$1.25 per share	55,378,403	55,107,596
Adjustments arising from the issuance of treasury stock upon poolings of interests	2,827,253	1,984,545
Par value of Common Stock, previously reserved, relating to the net assets acquired in 1963 from John H. Breck, Inc.	—	15,000
	<u>58,205,656</u>	<u>57,107,141</u>
Balance at end of year (Notes 1 and 7)	<u>\$493,496,952</u>	<u>\$456,915,061</u>

Consolidated Statement of Source and Application of Funds
Year Ended December 31, 1970 in Comparison with the Year Ended December 31, 1969

	1970	1969
SOURCE OF FUNDS		
Net earnings	\$ 91,525,927	\$ 89,870,096
Charges to earnings not requiring current cash outlays:		
Depreciation and depletion	58,513,790	54,834,159
Income taxes payable in the future	700,000	2,700,000
Decrease in cash and marketable securities	6,178,585	42,013,682
Decrease (increase) in intangibles resulting from business acquisitions	32,298	(1,242,686)
Increase in current liabilities	25,912,913	1,855,053
Par value of Common Stock issued for an acquisition	2,439,025	—
Treasury stock issued for acquisitions and incentive compensation plan	4,925,116	3,601,413
All other—net	1,436,515	(2,001,738)
	<u>\$191,664,169</u>	<u>\$191,629,979</u>
APPLICATIONS		
Dividends on Common Stock	\$ 55,378,403	\$ 55,107,596
Additions to plants, equipment and facilities—net	89,188,871	92,082,289
Increase in accounts receivable and inventories	21,663,762	27,401,446
Additions to investments and advances—net	17,768,175	2,520,096
Increase (decrease) in prepaid expenses and deferred charges	1,159,400	(834,789)
Decrease (increase) in funded debt not due within one year	1,997,612	(13,784,278)
Accrual for settlement of litigation, less related tax benefits	—	24,600,000
Purchases of treasury stock	4,507,946	4,537,619
	<u>\$191,664,169</u>	<u>\$191,629,979</u>

1. Assets, other than plants and facilities, and liabilities of the foreign subsidiaries are included in the consolidated balance sheet on the basis of official or other appropriate exchange rates at December 31, 1970; foreign plants and facilities are included on the basis of exchange rates prevailing at time of acquisition. The amounts so included comprise net current assets of \$70,400,000 and net other assets, principally plants and facilities, less depreciation, of \$57,400,000. Net earnings of foreign subsidiaries included in consolidated earnings amount to \$22,200,000. The consolidated earnings employed in the business include the company's equity in the net undistributed earnings of foreign subsidiaries amounting to \$78,200,000.

2. During 1970 the company issued 606,160 shares of Common Stock in connection with the Farmer Electric Products Co., Inc. and The Ervin Company acquisitions and is obligated to issue up to 487,804 shares based on future earnings of The Ervin Company. For accounting purposes these acquisitions have been treated as poolings of interests and accordingly the consolidated statement of earnings includes the earnings of these companies for the entire year. The operations of such companies are not material within the accounts of the company and no adjustment of the 1969 results has been made to reflect these poolings of interests. In December 1970 the company acquired the capital stock of Sunstate Builders, Inc. for cash.

The real estate subsidiaries (Ervin and Sunstate) are not consolidated with the accounts of the company. The condensed combined financial statements of the unconsolidated real estate subsidiaries for the year ended December 31, 1970 are as follows:

ASSETS	
Cash	\$ 1,767,984
Mortgage notes and other receivables	8,794,265
Inventories, properties and equipment, net (substantially all pledged to secure mortgage and other notes payable)	60,875,169
Other assets	3,557,079
	<u>\$74,994,497</u>

LIABILITIES AND SHAREHOLDER'S EQUITY	
Liabilities, substantially all mortgage and other notes payable	\$59,239,050
Shareholder's equity:	
Common stock and capital surplus	10,194,642
Earnings employed in the business	5,560,805
Total shareholder's equity	<u>15,755,447</u>
	<u>\$74,994,497</u>

STATEMENT OF EARNINGS AND EARNINGS EMPLOYED IN THE BUSINESS

Sales and revenues	\$39,454,933
Cost and operating expenses	35,509,548
Income before taxes	3,945,385
Income taxes	1,646,200
Net Earnings	2,299,185
Earnings employed in the business at beginning of year	3,261,620
Earnings employed in the business at end of year	<u>\$ 5,560,805</u>

- The companies are contingently liable at December 31, 1970 for approximately \$13,000,000 of mortgage notes assumed by others arising from sales of real estate.
- Mortgage and other notes payable mature at various dates through the year 1995 and bear interest at rates ranging from 4% to 12%.

3. Depreciation is provided on a straight-line composite basis over the estimated remaining useful lives of the assets.

4. Funded debt not due within one year is comprised of 3¾% promissory notes due 1977 to 1987 (\$75,000,000), 5¾% guaranteed sinking fund debentures due 1980 of a subsidiary (\$17,000,000), 6% guaranteed notes due 1972 to 1973 of a subsidiary (\$8,936,284) and sundry obligations (\$16,060,071).

5. The accounts for 1970 include provision for incentive compensation to officers and other employees. A portion of such amount is not payable currently in cash but is contingently payable in Common Stock of the company after employment terminates; pending allotment of the amount available for 1970, the portion so contingently payable in Common Stock is not determinable. The amount contingently payable in respect of allotments for prior years is \$4,098,813.

6. Approximately 3,100,000 shares of common stock would be issued under the proposed merger agreement with Shulton, Inc. The authorized capital of the company includes 650,000 shares of Preferred Stock with a par value of \$1 per share, none of which is outstanding.

7. The promissory notes contain certain restrictions including restrictions on the payment of dividends. As a result of such restrictions, the amount of earnings employed in the business at December 31, 1970 which may be applied to the payment of cash dividends is limited to \$161,000,000.

8. At December 31, 1970 the company owned and held in its treasury 312,204 shares of Common Stock, which are available at the election of the company to fulfill contingent obligations under the company's Incentive Compensation Plan and for other corporate purposes.

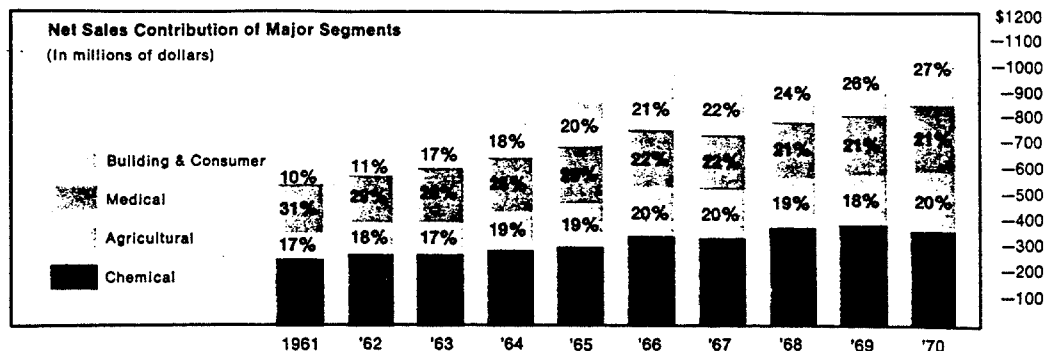
9. Employees' benefits include the cost of pension, group insurance and social security programs. The company and its consolidated subsidiaries have various pension plans covering substantially all their employees, including certain employees in foreign countries. The company's policy is to accrue and fund pension costs over the service lives of the covered employees. The total pension expense for the year was \$5,832,000.

10. Under the company's stock option plan key employees may be granted options to purchase, at not less than 100% of market value on the date of grant, a maximum of 1,500,000 shares of Common Stock. In 1968 and 1969 qualified stock options were granted exercisable over a period of not more than five years from date of grant and, in 1970 non-qualified stock options were granted (subject to approval by shareholders) exercisable over ten years from the date of grant, all in cumulative installments of one-third of the number of shares commencing one year after date of grant and annually thereafter.

At December 31, 1970, qualified stock options to purchase 369,535 shares at \$33.50 and 8,800 shares at \$25.75 and non-qualified stock options to purchase 171,630 shares at \$31.00 per share were outstanding, of which 249,510 options were exercisable. During the year options covering 630 shares were exercised at \$33.50 and options covering 95 shares were exercised at \$25.75. These options and the shares contingently issuable in connection with the acquisition of The Ervin Company do not result in dilution of earnings per share.

11. The company is contingently liable as guarantor on loans outstanding of an associated company in the amount of \$28,000,000.

12. Reference is made to the remarks under "Litigation" in the foregoing report of the Board of Directors, with respect to the antibiotics litigation in which the company is involved.



Ten Year Comparative Summary of Financial Statistics

	1970	1969
Net Sales	\$1,158,440	\$1,087,098
Earnings before Taxes on Income	151,175 ^(a)	166,870
Provision for Taxes on Income	64,500	77,000
Net Earnings	86,675 ^(a)	89,870
Dividends on Common Stock	55,378	55,108
Number of Common Shares at Dec. 31 (excl. treasury shares) ^(c)	44,870	44,366
Earnings per share of Common Stock ^(c)	1.93 ^(a)	2.02
Dividends per share of Common Stock ^(c)	1.25	1.25
Provision for depreciation, amortization and depletion	58,514	54,834
Gross additions to plant facilities (incl. acquisitions)	92,672	95,833
Current Assets	445,170	429,685
Current Liabilities	185,438	159,525
Working Capital	259,732	270,160
Investment in Associated Companies	34,966	40,781
Plants, Equipment and Facilities	1,089,966	1,024,445
Less accumulated depreciation, amortization and depletion	558,654	523,808
Net Amount	531,312	500,637
Funded Debt not due within one year	116,996	118,994
Shareholders' Equity:		
Preferred Stock	—	—
Common Stock	225,911	223,468
Capital Surplus	21,087	20,563
Earnings employed in the business	493,497	456,915
	740,495	700,946
Less cost of Common Stock held in treasury	9,699	10,116
Total Shareholders' Equity	\$ 730,796	\$ 690,830

(a) Exclusive of extraordinary gain (less related income tax)

(b) Restated—The statistics for the years 1961 through 1968 have been revised to reflect the accrual in 1969 for settlement of litigation in the amount of \$54,000,000 less related tax benefits of \$29,400,000, which has been applied to years 1954 through 1966.

(c) After giving effect to the issuance on April 18, 1966 of one additional share for each share outstanding

PRINCIPAL SALES OFFICES IN THE U.S.

Akron, Ohio	Davenport, Iowa	Kalamazoo, Mich.	New York, N.Y.	San Antonio, Tex.
Albuquerque, N.M.	Denver, Colo.	Kansas City, Mo.	Oakland, Calif.	San Francisco, Calif.
Atlanta, Ga.	Des Moines, Iowa	La Puente, Calif.	Oklahoma City, Okla.	South Bend, Ind.
Bluefield, W. Va.	Detroit, Mich.	Latrobe, Pa.	Omaha, Neb.	Springfield, Ohio
Boston, Mass.	Fairfield, N.J.	Linden, N.J.	Pearl River, N.Y.	Tampa, Fla.
Bound Brook, N.J.	Falls Church, Va.	Los Angeles, Calif.	Philadelphia, Pa.	Tulsa, Okla.
Buffalo, N.Y.	Finderne, N.J.	Louisville, Ky.	Phoenix, Ariz.	Washington, D.C.
Charlotte, N.C.	Grand Rapids, Mich.	Memphis, Tenn.	Pittsburgh, Pa.	Wayne, N.J.
Chicago, Ill.	Greensboro, N.C.	Miami, Fla.	Plainview, N.Y.	West Hartford, Conn.
Cincinnati, Ohio	Havre de Grace, Md.	Milwaukee, Wis.	Portland, Ore.	West Springfield, Mass.
Clearwater, Fla.	Honolulu, Hawaii	Minneapolis, Minn.	Princeton, N.J.	Woodbridge, Conn.
Cleveland, Ohio	Houston, Tex.	Mobile, Ala.	Renton (Seattle), Wash.	Woodbury, L.I., N.Y.
Dallas, Tex.	Indianapolis, Ind.	Montgomery, Ala.	Richmond, Va.	
Danbury, Conn.	Jacksonville, Fla.	Natick, Mass.	St. Louis, Mo.	

PRINCIPAL SALES OFFICES OUTSIDE THE U.S.

Auckland, N.Z.	Guatemala City, Guatemala	Managua, Nicaragua	Rio de Janeiro, Brazil	Taipei, Taiwan
Bangkok, Thailand	Hong Kong	Manila, Philippines	Rome, Italy	Tilbury, Canada
Bogota, Colombia	Johannesburg, S. Africa	Melbourne, Australia	Rotterdam, The Netherlands	Tokyo, Japan
Bombay, India	Karachi, Pakistan	Mexico D.F., Mexico	San Juan, Puerto Rico	Toronto, Canada
Brussels, Belgium	Kinshasa, Congo	Milan, Italy	Sao Paulo, Brazil	Vancouver, Canada
Buenos Aires, Argentina	Lima, Peru	Montreal, Canada	Seoul, Korea	Zurich, Switzerland
Caracas, Venezuela	London, England	Munich, Germany	Stockholm, Sweden	
Catania, Italy	Madrid, Spain	Oullins, France	Sydney, Australia	
Copenhagen, Denmark		Paris, France		

PLANTS IN THE U.S.

Aberdeen, Md.	Damascus, Va.	Hughestown, Pa.	Painesville, Ohio	Springhill, La.
Albany, Ga.	Danbury, Conn.	Jackson, Miss.	Pearl River, N.Y.	Stamford, Conn.
Alden, Iowa	Demopolis, Ala.	Joliet, Ill.	Pensacola, Fla.	Sunset/Whitney Ranch, (Sierra), Calif.
Andersonville, Ga.	DeRidder, La.	Kalamazoo, Mich.	Perrysburg, Ohio	Tarboro, N.C.
Azusa, Calif.	Escanaba, Mich.	La Puente, Calif.	Philadelphia, Pa.	Wallingford, Conn.
Benton, Ark.	Evendale (Cincinnati), Ohio	Longview, Wash.	Piney River, Va.	Warners, N.J.
Bound Brook, N.J.	Fairfield, N.J.	Madisonville, Ky.	Plainview, N.Y.	Weeping Water, Neb.
Brewster, Fla.	Finderne, N.J.	Marietta, Ohio	Plymouth, N.C.	West Springfield, Mass.
Buchanan, N.Y.	Fort Worth, Tex.	Miami, Fla.	Pottsville, Pa.	Willow Island, W. Va.
Charlotte, N.C.	Fortier (New Orleans), La.	Michigan City, Ind.	Princeton, N.J.	Woodbridge, N.J.
Chattanooga, Tenn.	Georgetown, S.C.	Mobile, Ala.	Sanford, Me.	Woodbury, L.I., N.Y.
Cloquet, Minn.	Hamilton, Ohio	Monticello, Miss.	Savannah, Ga.	
Columbus, Ohio	Hannibal, Mo.	Natick, Mass.	South Norwalk, Conn.	
Coosa Pines, Ala.	Havre de Grace, Md.	New Castle, Pa.	Springfield, Ohio	

PLANTS OUTSIDE THE U.S.

Beachville, Canada	Cartagena, Colombia	Madrid, Spain (2)	Niagara Falls, Canada (2)	St. Jean, Canada
Bogota, Colombia	Catania, Italy (2)	Managua, Nicaragua	Orilla, Canada	Sao Paulo, Brazil
Brussels, Belgium	Gosport, England	Melbourne, Australia	Oullins, France	Sydney, Australia
Buenos Aires, Argentina (2)	Guadalajara, Mexico	Mexico D.F., Mexico	Rezende, Brazil	Tilbury, Canada
Bulsar, India	Hsinchu, Taiwan	Milan, Italy	Rio de Janeiro, Brazil	Witbank, S. Africa
Caracas, Venezuela (2)	Johannesburg, S. Africa	Montreal, Canada	Rotterdam, The Netherlands	
	Karachi, Pakistan	Munich, Germany		

FARM SERVICE CENTERS

(Bulk blending fertilizer plants)

125 centers in fourteen states in the U.S.; fourteen wholly owned and twenty-one 50% owned in Canada

RESEARCH AND DEVELOPMENT LABORATORIES

Bound Brook, N.J.	Evendale, Ohio	Painesville, Ohio	Piney River, Va.	Stamford, Conn.
Danbury, Conn.	Finderne, N.J.	Pearl River, N.Y.	Porto Alegre, Brazil	Wallingford, Conn.
East Paterson, N.J.	Niagara Falls, Canada	Pensacola, Fla.	Princeton, N.J.	

PRINCIPAL ASSOCIATED COMPANIES

(40% to 50% owned)

Arizona Chemical Company	Cyanenka S.A.	Lederle (Japan), Ltd.
Cyanamid-Ketjen Katalysator N.V.	Formica International Limited	Sherkat Sahami Cyanamid-KBC
Cyanaquim, S.A. de C.V.	Jefferson Chemical Company, Inc.	N. V. Titaandioxydefabriek Tiofine