entomology, at Iowa State, was awarded $\$ 2500$ for a project exploring the effectiveness of vermiculite as a carrier of insecticides, particularly those destroying corn rootworm. C. J. Nusbaum and J. N. Sassar, both of the division of biological sciences and plant pathology, North Carolina State, were granted $\$ 1500$ to further studies of solid carriers for fumigants and soil pesticides.

Lawrence L. Miller and T. B. Davich of Virginia Polytechnic's Agricultural Experiment Station and the Tidewater Research Station at Holland, Va., have been awarded a total of $\$ 1500$. Dr. Miller will receive $\$ 1000$ to carry on his basic studies of the habits of various plant parasites. Dr. Davich has been given $\$ 500$ for his investigations of the southern corn rootworm, tobacco thrips, and green June beetle larvae.

Ralph J. Hervey, assistant plant pathologist with the Texas Agricultural Experiment Station, was given $\$ 350$ for studying vermiculite as a carrier for fighting fungus diseases of cotton.

## General Foods Approves Plan for New Research Center

Final building plans for a new food research center at Tarrytown, N. Y.. have been approved by the board of directors of General Foods.

The program provides for the construction of administration, laboratory, and engineering research buildings on a $55-$ acre site. The buildings will be airconditioned and soundproofed and will furnish working space for an estimated 650 persons. Construction will begin in the fall and the center should be ready for occupancy by mid-1957.

## Berkeley Chemical Completing Research and Control Lab

Berkeley Chemical Corp., Berkeley Heights, N. J., is completing this month a new research and control laboratory adjoining a new auxiliary warehouse. The new, single-story structure will contain more than 5500 square feet of space, more than half of which will be occupied by laboratory facilities. Space has also been provided for a library.

## FOREIGN

## Fisons to Sell Du Pont <br> Ag Chemicals in U.K.

Fisons Pest Control, Ltd., has been appointed sole distributors for the Du Pont range of agricultural chemicals in the United Kingdom, Eire, and British possessions in Africa. These chemicals will be offered through the usual sales channels under Du Pont trade names and British patents.

The first of the chemicals to be introduced in the U. K. for farm use is the herbicide Karmex W, active ingredient of which is CMU [3-( $p$-chlorophenyl)-1-1 dimethyl urea]. Karmex $W$ was first introduced by Du Pont in 1952 and was first marketed on a large scale in 1954.

## New Velsicol Subsidiary To Handle Foreign Sales

Velsicol Corp. has announced formation of a separate company which will handle expanding foreign trade activities. The new company, Velsicol International Corp., C. A., will be responsible for foreign insecticide sales and will also market Velsicol resins, solvents, and saturates outside the U. S. President of Vel-
 sicol International is E. T. Collinsworth, Jr., who is retaining his position as vice president and general manager of the parent company. Main office of the new organization will be in Chicago; a branch office is to be established in New York City.

## BUSINESS AND FINANCE

## Dow's Fiscal Year Best Yet

A new high sales record of $\$ 470,742$,000 is reported by Dow Chemical for its 1955 fiscal year, ended May 31, a $10 \%$ gain over 1954 sales of $\$ 428$ million and $9 \%$ better than its previous best year, 1953.

## On the Cover

## Is the Challenge Being Met?

Some $17 \%$ of the $U^{-}$. S. acreage in principal crops was sprayed or dusted with agricultural chemicals in 1952, according to an extensive USDA study issued earlier this year. Included was $48 \%$ of cotton acreage, $11 \%$ of corn acreage (mostly treated with herbicides), $75 \%$ of the potatoes, $79 \%$ of the tobacco, and $12 \%$ of the small grains.

That substantial acreages of U. S. crops were untreated for pest control represents a challenge to the agricultural chemicals industry. How its marketing of pesticides is meeting that challenge is discussed in the feature in this issue on page 738.

Dow's report also showed other income, including dividends from associated companies, amounting to $\$ 8,105$,000 . bringing its total income for the year to $\$ 478,847,000$.

Net earnings showed a $12 \%$ improvement at $\$ 37,414,000$ as against $\$ 33,-$ 425,000 in 1954 . These were equivalent to $\$ 1.64$ and $\$ 1.42$ per share of common stock outstanding in the two years.

Dow reported capital expenditures of $\$ 49$ million during the year and predicted it would spend a comparable amount in the current year.

The company's sales revenue was attributed $58 \%$ to chemicals, $32 \%$ to plastics, and $10 \%$ to magnesium. Most lines were said to have enjoyed good growth, and while magnesium sales were adversely affected by the cessation of government stockpiling, commercial markets for the metal showed improvement.

## National Distillers' Earnings at \$6,811,244 in First Half

Net earnings of National Distillers Products Corp. for the six months ended June 30 amounted to $\$ 6,811,244$, an increase of $\$ 453,254$ over those for the similar 1954 period. The current earnings, after preferred dividends, equal 69 cents a share, compared with 63 cents a share in 1954 first half.

For the quarter ended June 30, 1955, National Distillers reports net of $\$ 3,-$ 452.579 , or 35 cents a common share, compared with $\$ 3,363,394$, or 34 cents a share for the second quarter of 1954.

## Sun Chemical's Sales Climb 3\%; Profits Up $21 \%$

Sun Chemical Corp.'s sales and earnings set new highs in the first half of this year and volume climbed to $\$ 20,844,874$, $3 \%$ above the initial six months of 1954, it is announced. Net profit for the first six months of 1955 shows an increase of $26.8 \%$ as compared with the same period of 1954 .

On sales of $\$ 20,844,874$ in 1955 's first six months, net profit was $\$ 782,497$. In the comparable period of 1954, sales were $\$ 20,246,157$ with a net profit of \$617,075.

Earnings in the six month period just past were 61.8 cents against 48 cents in 1954. Profit before taxes in the first half of 1955 was $\$ 1,662,215$; in 1954, $\$ 1,371,436$, a gain of $21.2 \%$.

## Pennsalt Reports Sales at $16 \%$ Above '54

Pennsylvania Salt Mfg. Co. reports net earnings totaling $\$ 1,975,765$ for the first six months of 1955 , equivalent to


## H1/OL MAKES LIME GO FARTHER

Crops starve where acid soils fix molybdenum in unavailable form. Moly can be released to crops by heavy liming. But direct treatment of the soil with traces of a moly chemical is far cheaper. Sometimes one ounce of moly can replace one ton of limestone.

Moly makes light liming practical on many acid soils where normal liming is too expensive. Moly lets lime concentrate on its main jobs - supplying calcium, releasing phosphate, and regulating uptake of other plant foods.

Test moly and lime on your acid soils. Write for our new bulletin "Molybdenum and Lime in the Treatment of Acid Soils." Climax Molybdenum Company, Department 44, 500 Fifth Avenue, New York 36, N. Y.
fecm why, first hand

## A little moly in each ton of fertilizer is BIG crop insurance.

## How Moly reduced lime dressings to $1 / 10$ ton an acre

In these test plots, A. J. Anderson and D. V. Moye* showed that treating a highly acid soil ( $\mathrm{pH} 4.6-4.9$ ) with traces of moly reduced lime requirements to only $\mathbf{1 / 1 0}$ ton an acre.


CONTROL. With only a basal dressing of superphosphate no clover could be established.
MOLYBDIC OXIDE 2 OZ. AN ACRE. Molybdenum alone was
not effective in improving yields.

| LIMESTONE $1 / 10$ TON AN ACRE. Liming gave some im. |
| :--- |
| provement even at this low rate, but much heavier |
| dressings were needed for good yields. |

*Austr. J. Agric. Res. 3, 95-110 (1952).
$\$ 1.59$ per share. Earnings for the comparable period in 1954 were $\$ 1.43$ per share of which 15 cents were nonrecurring earnings resulting from the sale of capital assets. Second quarter earnings of $\$ 1,102,117$ showed a gain of $26 \%$ over the first quarter of 1955.
Sales for the first half of 1955 totaled $\$ 33,906,591$, up $16 \%$ over the corresponding period last year. Second quarter sales were $\$ 18,811,639$, an increase of $20 \%$ over the second quarter of '54 and $24 \%$ higher than the first quarter of this year.

## Monsanto's Earnings <br> Up 40\%; Sales, 22\%

Sales of Monsanto and its consolidated companies for the first six months of 1955 amounted to $\$ 207,514,258$, an increase of $22 \%$ over sales of $\$ 169,714,534$ for the first six months of last year.

Net income for the first half of 1955 amounted to $\$ 16,409,680$, as compared to net income of $\$ 11,597,710$ for the first half of 1954. After provision for preferred dividends, this was equivalent to $\$ 3.05$ per share on the $\$ 5.00$ par value common stock, or $\$ 1.02$ per share on the new $\$ 2.00$ par value common stock after the three-for-one split approved by stockholders in July. For the first six months of 1954, the adjusted earnings on the $\$ 5.00$ par value common stock were $\$ 2.15$ per share.

## Diamond Alkali Sets New Record

Substantial increases in sales and earnings of Diamond Alkali for the first six months of 1955 over the same period in 1954 are reported.

Both net sales and earnings set new records, sales showing a $14 \%$ increase and earnings per common share registering a $29 \%$ gain over the same period in 1954.

Net sales for the six months ended June 30, 1955, were $\$ 53,660,322$ against $\$ 47,059,190$ in the same 1954 period. Net income after taxes was $\$ 4,045,573$, which, after preferred dividends, is equivalent to $\$ 1.67$ per common share. This figure compares with net earnings of $\$ 3,197,758$, or $\$ 1.29$ per share for the first six months of 1954, restated to reflect the average federal income taxes and certain other items in 1954.

## Michigan Chemical Shows Profit of 25 Cents a Share

Michigan Chemical Corp. figures for the six months ended June 30 showed net income of 25 cents a share of common stock as compared to a loss of 18 cents a share in the first six months of 1954

Before taxes, the earnings were $\$ 141$, -

238 in 1955 against a loss of $\$ 118,999$ in the comparable period in 1954. After taxes and giving allowance for tax credits, the figures were $\$ 137,838$ net gain against a loss of $\$ 94,299$.
Sales for the period were $\$ 3,311,911$ in the 1955 period and $\$ 2,934,942$ in the 1954 six months.
The second quarter showed an improvement in net earnings before taxes of $\$ 107,988$ against $\$ 90,064$ in 1954 even though sales were lower for the 1955 quarter as compared with 1954, or $\$ 1,723,282$ against $\$ 1,986,116$. Physical volume was larger though with dollar volume off because of lower DDT prices.
The company reported further activity in projects leading towards greater utilization of its brine materials and unused equipment. Attention also is being centered on diversification into certain petroleum chemical fields.

## Commercial Solvents' Sales Gain 5\% in First Half

Commercial Solvents reports for the quarter ended June 30, consolidated net earnings of $\$ 757,985$ equal to 29 cents per share, which includes extraordinary net income of 12 cents per share. Sales for the quarter were $\$ 12,010,718$, against $\$ 11.8$ million in the 1954 period.

Consolidated net earnings for the six months ended June 30, 1955 were $\$ 1,572,171$ equal to 60 cents a share. Sales for the six months were $\$ 24,956,927$ compared with $\$ 23.8$ million in the first half of 1954.

## Atlas Powder's First-Half Earnings Up 33\%

Atlas Powder's earnings in the first half of 1955 rose $33 \%$ with an increase of $4 \%$ in sales, according to the semiannual report.

Net earnings after taxes in the first six months this year were $\$ 1,644,440$, compared with $\$ 1,230,656$ earned in the same period of 1954.

After preferred dividends, the 1955 first half earnings equalled $\$ 2.25$ a share on the 704,607 common shares outstanding on June 30 , while 1954 first-half earnings equalled $\$ 2.01 \mathrm{a}$ share.

Sales and operating revenues in the first six months of 1955 were $\$ 30,007,247$, against $\$ 28,841,111$ for the 1954 period. In March 1955, the company sold its industrial finishes business, and in April disposed of its laundry roll cover operation. In May, it bought Parke Thompson Associates, designers of fuzes and boosters for ordnance matériel.

Atlas president, Ralph K. Gottshall, said that the good earnings experienced in the first half of the year were continu-
ing, and that income for 1955 as a whole was expected to be well ahead of 1954.

## Olin Mathieson's Sales Up 12\% in 2nd Quarter

Sales of Olin Mathieson Chemical Corp. in the U.S. and Canada increased approximately $12 \%$ in the three months ended June 30, 1955, compared with the like period last year, while net income showed a gain of about $11 \%$, the company's report discloses.

Sales for the second quarter amounted to $\$ 142,103,684$, up from $\$ 126,468,943$ last year, and earnings came to $\$ 10,-$ 998,502 , up from $\$ 9,938,631$ a year ago. These totals all reflect the acquisition of Blockson Chemical Co., which was formally completed during the second quarter.
Net income amounted to 88 cents per share of common stock, compared with 82 cents a share in the like 1954 period.

For the first six months of 1955, Olin Mathieson's sales in the U. S. and Canada rose to $\$ 270,800,964$ from $\$ 244,167,642$ in the first half of 1954 , reflecting the Blockson acquisition in both periods. Earnings in the first half of this year amounted to $\$ 19,941,739$, or $\$ 1.60$ per share of common stock, compared with $\$ 1.54$ per common share a year ago.
Excluded from the statement for the first half of 1955 were sales from foreign manufacturing and distributing operations totaling $\$ 20,661,184$, and net income of $\$ 1,650,364$, which was equivalent to 14 cents per common share.
Acquisition of Blockson Chemical Co. was accomplished through the issuance of $1,127,943$ additional shares of Olin Mathieson common stock, the report noted. It also stated that negotiations were completed during the quarter for the acquisition of Brown Paper Mill Company, Inc., of West Monroe, La., and its four associated companies, for 725,000 shares of Olin Mathieson common stock and $\$ 50$ million in cash.

## ASSOCIATIONS

## Antibiotics in Agriculture Topic of 3-Day Meet

An International Conference on the Use of Antibiotics in Agriculture, both animal and plant, will be held in Washington, D. C., Oct. 19 through 21. Sponsor is the National Academy of SciencesNational Research Council with the cooperation of the Agricultural Research Institute and supported by the American Cyanamid Co., Merck \& Co., Charles Pfizer \& Co., Inc., and E. R. Squibb \& Sons.

Invitations to participate in the con-

