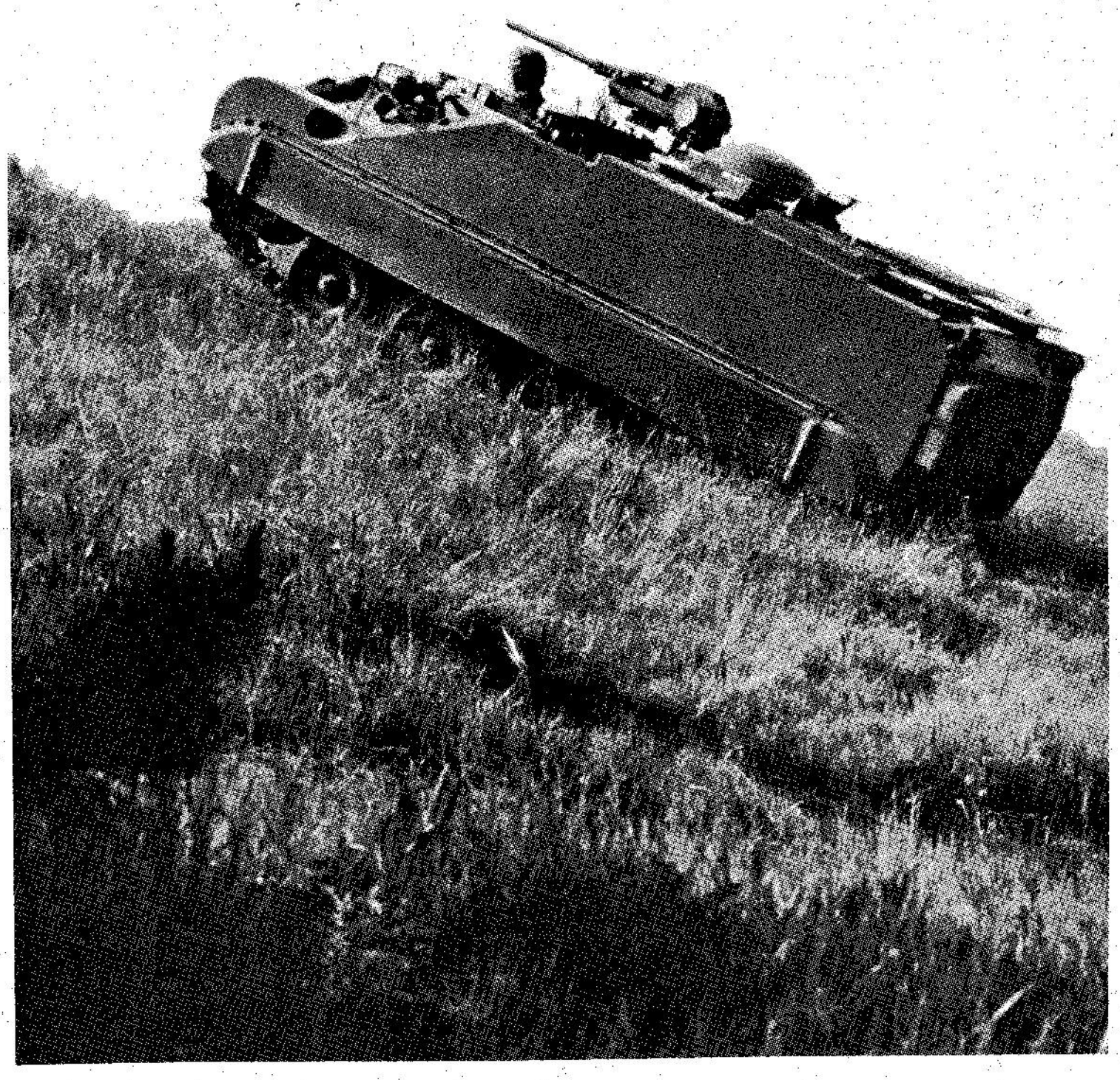
FMC



FMC: Growth of a Conglomerate

FMC Corporation, headquartered in San Jose, California, has grown with California. Originally serving agribusiness, California's largest industry by sales, FMC has diversified since World War II to become a major part of California's largest industry by employment, aerospace and defense. Founded in 1883 as the John Bean Spray Company, FMC (formerly Food Machinery and Chemical Corporation) has grown to become the nation's 41st largest war contractor (fiscal 1970) with total sales of $1.3 billion (1970). FMC produces agricultural machinery, ordnance (weaponry), textiles, and chemicals.

In 1883, a man named John Bean, living in agricultural Santa Clara County, invented a continuous pressure pump. He formed the John Bean Spray Company. Little did he know that thirty-eight acquisitions later his company would be one of the nation's largest corporations.

For nearly fifty years the company grew, serving the growing agricultural industry. In 1928, however, the John Bean Company began its ambitious path of acquisition. Under of the leadership of John Crummey, the owner, and Paul Davies, his son-in-law and company vice-president, they merged with a leading manufacturer of canning equipment, renaming the company the Food Machinery Corporation.

Between 1928 and 1940, the company prospered, despite the extended Great Depression, and acquired many more companies. The most prominent was Peerless Pump, which chiefly produced irrigation machinery for California's Central Valley. This facility later branched into oilfield equipment.

World War II occurred just in time to save the New Deal. The nation began an economic upswing; and FMC, rather than lose out in the war-time restriction of materials, decided to jump on the bandwagon. Prior to the war FMC's annual sales were close to $10 million. By the end of the war, according to then Board Chairman Paul Davies, sales had reached $241 million.

FMC made the "Water Buffalo," the amphibious tracked vehicle (LVT) used in landing invasions. The "Water Buffalo" was designed by James H. Hait, current FMC Board Chairman. According to Business Week,

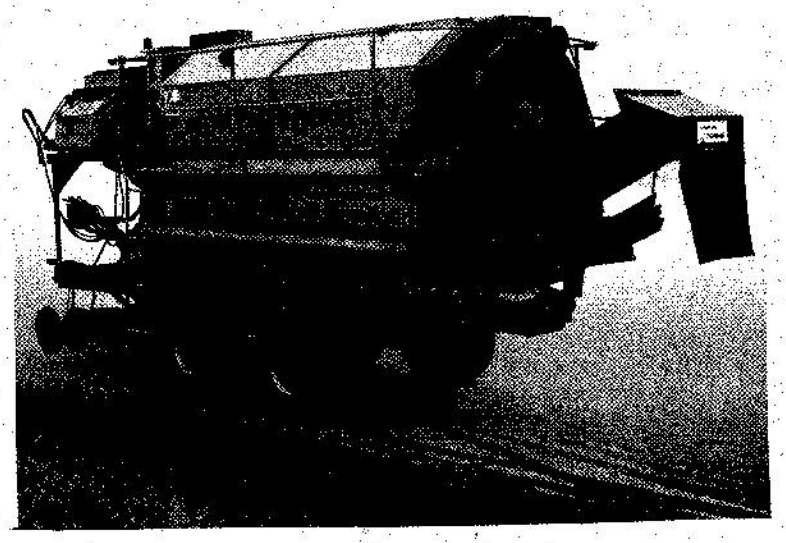
> FMC's wartime sidestep into defense work was an expedient to keep an engineering organization together. . . . But Davies . . . also decided that although the war was over, defense was here to stay.

That foresight led to the establishment of FMC's ordnance division and a continuously profitable association with the Department of Defense. Hait, who was a research and engineering consultant for the Defense Department, managed the ordnance division throughout the Korean War. During the Korean War FMC produced the Army's M75 armored personnel carrier. This vehicle "led to FMC's development of the M59 armored personnel carrier and to the currently-produced M113 carrier."

Although much of FMC's war work has been accomplished through expansion within the company, FMC made two important acquisitions in this field. In 1964 FMC acquired Northern Ordnance, Inc., of Minneapolis, a leading designer of naval equipment, such as guided missile launching pads, and which liberally utilized Navy-owned office space and plant facilities. The second purchase was Gunderson Brothers Engineering, not exclusively a war contractor, in 1965. At the time Gunderson (as part of FMC's machinery division) held contracts which included the production of marine craft and Navy patrol vessels. Gunderson is a major producer of equipment for processing containerized cargo. As such it threatens the jobs of longshoremen, warehousemen, and teamsters.

FMC's thirsty tentacles spread in many directions. For many years FMC produced sprayers for agribusiness. The next logical step was to produce the ingredients going into the sprayers. To this end FMC purchased Niagara Sprayer and Chemical Co. in 1943. Niagara produced nicotines and inorganic insecticides.

Niagara was big in inorganic insecticides, but the postwar trend called for organics. Not to be left behind, FMC acquired Westvaco Chemical in 1948. Westvaco produced DDT and BHC. It also owned extensive reserves of phosphates. The purchase, in addition to



getting FMC into the DDT business, started the company on the road to becoming the third-largest phosphate producer in the nation.

The company next purchased Ohio-Apex, an important producer of plasticizers, to gain captive markets for some of Westvaco's products. FMC also began a business venture with National Distillers to promote Dimazine, a propellant used in ICBM's. In 1963 FMC purchased American Viscose Corporation, a producer of acetate fibers and cellulose film. One of the holdings of American Viscose was a lush block of stock in Monsanto Corp.--a competitor in chemical production. Though this stock was sold as part of the merger agreement (the Justice Department tried to apply the Clayton Anti-Trust Act to the merger), a strong business relationship with Monsanto had already been established. Another company in which American Viscose had a 50% interest was Ketchikan Pulp Co. FMC retained its interest, moving into Alaskan timber.

FMC's machinery division now includes at least ten firms that were once independent companies. Link-Belt Corporation, bought in 1967, is the most recent purchase. Link-Belt makes mechanical power transmission products and heavy industrial equipment. The purchase of Link-Belt complemented the company's growing international interests, including a South African division which produced mining equipment and port facilities.

When FMC acquired Westvaco in 1948 it changed its name from Food Machinery to Food Machinery and Chemical. In 1961, as its products diversified further, the company became simply FMC. FMC is a conglomerate, a grab-bag company which has grown quickly through the acquisition of many smaller companies.

In a study of conglomerates by the Federal Trade Commission which included FMC, the commission concluded:

> . . . conglomerate-derived market power may be used to defend or expand the firm's position in ways inimical to competition.

FMC, by buying and selling to itself through its many divisions, represents the ultimate tendency in private enterprise, the tendency to eliminate competition.

"a lot of mean weapons"

"We make a lot of mean weapons," boasts FMC's chairman of the board, James Hait. Nearly 20% of FMC's income is for the development and production of sophisticated weapons systems, including armored vehicles, anti-personnel mines and projectiles, and assault and patrol boats. "Manufactured by FMC as a patriotic contribution to defense," they are widely used and highly regarded by the U.S. and ARVN forces in the war of counterinsurgency in Indochina.

FMC diversified from food machinery into war products in 1941, receiving a $60 million contract to build an amphibious landing vehicle--at a time when the rest of the company's sales amounted to only $12 million. Recognizing the profit potential of war work, FMC expanded its ordnance operations to the extent that it is currently the leading producer of armored vehicles in the United States. Its biggest moneymaker is the M113 Armored Personnel Carrier (APC), featured recently in the news after fifty-two of them spearheaded the invasion of Laos. Several days later the M113's versatility in counterinsurgency was demonstrated by the National Guard in an assault on a black church in Wilmington, North Carolina.

Since FMC received the first contract in 1959, the M113 has been the company's largest defense program. Now the most widely-used armored vehicle in the "Free World," over 30,000 M113's have been supplied by FMC to the armies of the United States and thirty other countries. Carrying three machine guns and thirteen soldiers, the M113 is used extensively in Southeast Asia for the "firepower and mobility (which the M113) has successfully demonstrated in its counterinsurgency role." Each mechanized battalion in Vietnam contains forty-eight M113's, with twenty-five assigned to each armored cavalry squadron.

Defense officials have stated that "the M113 armored personnel carrier has taken its place alongside the helicopter as workhorse of this war." Concludes Jane's Weapons Systems, the authoritative publication in the field, there is

> . . . no doubt that the M113 has been one of the most successful vehicles ever in the U.S. Army service, and has proved especially valuable in the special circumstances of the Vietnam War.

FMC's current contract calls for delivery of 4,452 of its M113's, with production expected to last through

In 1959 FMC built and operated a major manufacturing plant for the U.S. government which produced Sarin, a lethal nerve gas which causes death by suffocation within one to ten minutes. The plant, located in Newport, Indiana, was run on an estimated annual budget of $3.5 million, employing over 300 workers around the clock. The Newport facility was responsible for the production of the nerve gas and its loading into rockets, land mines, and artillery shells.

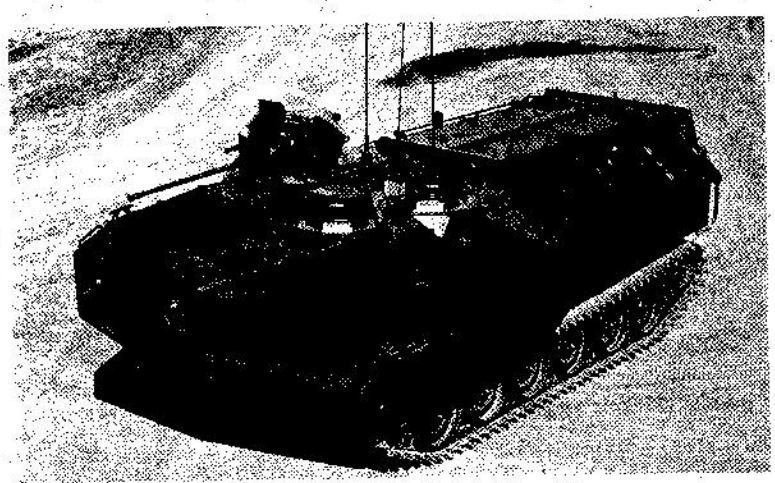
On March 11, 1969, William Hewlett, who sits on the boards of both FMC and Stanford University, was questioned about FMC's production of nerve gas before a Stanford audience of 1400 people. His first response was "FMC does not make nerve gas." When questioned in more detail with references cited, he responded:

> I'm amazed by the accuracy and reliability of your sources, but I happened to check with the president of FMC, whom I consider superior to your sources, and he says that they are not making nerve gas at the present time.

When asked if FMC had ever made nerve gas, he finally admitted:

> The answer is YES. The were asked by the government to build a plant, which they built and operated at the request of the government, and they turned that plant over to the government about six months ago.

FMC returned management responsibility for the Indiana plant back to the government in 1968. It is useful to remember, however, that one of the prime ingredients of nerve gases is an anti-cholinesterase agent which FMC still produces for its organo-phosphate pesticides.



LVTPX-12—Landing vehicle tracked personnel experimental, FMC Corporation's prototype of the new LVTP-7 series and lates of the Marine innovations whose ancestors go back to 1923.

March, 1972. This contract has contributed $98.3 million to the company's income, and FMC will receive millions more from the production of ten variations of the basic M113. These include mortar and ammunition carriers, mobile command posts, self-propelled flamethrowers, and carriers for the Vulcan anti-aircraft gun and the Chaparral, Lance, Pershing, and Hawk missile systems. The Chaparral is a surface-to-air missile system, which, together with the Vulcan, has been scheduled for deployment in Southeast Asia. Lance and Pershing, equipped with nuclear warheads, are "designed to provide artillery support for infantry, armored, mechanized, and airborne divisions" on the battlefields of the world. Several hundred Hawk missiles defend the U.S. air bases in Vietnam, include those deployed by six Marine battalions around at least three air fields near Da Nang.

FMC can be found on every front of the War. Long before its armored personnel carriers rolled across the Laotian border in the west, the "pacification" in the south was enforced with the aid of 105 river patrol boats, designed expressly for the delta areas of South Vietnam by an FMC subsidiary, Gunderson Engineering. Also used to deploy and support troops in the Mekong Delta is the River Assault Flotilla, consisting of an Assault Support Patrol Boat, a Monitorboat, an Armored Troop Carrier, and a Command and Control Boat, all of which FMC had a hand in designing or producing.

If U.S. Marines invade North Vietnam, they will be transported by FMC's brand-new LVTP-7 amphibious assault vehicles, now being manufactured in San Jose at a total cost of over $78 million. The first of the 942 vehicles will roll off the production lines in June, 1971. According to Armed Forces Management magazine, they are

> . . . to be used in amphibious operations to transport landing forces, their supplies and equipment from ship to shore, through open seas and high surf zones to inland objectives, and for subsequent tactical operations ashore.

The LVTP-7 will carry twenty-five troops or five tons of cargo; and FMC has built a prototype of the giant LCA (Landing Craft Assault) vehicle which is capable of transporting thirty tons of cargo in amphibious operations.

The San Jose Ordnance operations also produce suspension and alignment systems for the Minuteman ICBM, which is fueled by Dimazine, produced by FMC's chemicals division in Baltimore. Another FMC division in Minnesota specializes in the design and production of gun mounts and guided missile launching systems which are used on "a great majority of the surface ships in the free world navies."

FMC-designed patrol boat enforces the pacification of the Mekong Delta.

Many American believe that America's stockpile of tactical nuclear weapons exists as a deterrent to "conventional war or confrontation with other major powers. Recently, however, military strategists have gone beyond considering atomic weapons as a defense against Russian attack, and are currently considering their usefulness in crushing guerilla movements in underdeveloped countries.

There have been several trial balloons in the press in the last six months, as the government tries to discern public response to the use of nuclear weapons. The New York Times (October 28, 1970) reports that atomic land mines, originally developed for NATO, might be more appropriate in other places:

> The atomic land mines could block a mountain pass against attacking forces by contaminating the area with nuclear fall-out and by caving in earth and rocks from the heights . . . in sparsely populated areas with relatively few avenues of invasion, atomic land mines could be an effective weapon.

The U.S. has long desired to block off the "Ho Chi Minh Trail" in Laos. With the failure of massive bombing and South Vietnamese ground troops, however, the nuclear alternative becomes a strong possibility. C.L. Sulzberger, chief foreign correspondent for the New York Times, wrote from Paris last November 15:

> Limited commitments to conventional defense are seen as increasingly outmoded and yet total warfare is a dreadful absurdity. . . . Consequently, the search focuses on a third solution--between impossible nuclear disaster and unsuccessful conventional warfare. The answer may well lie in the field of truly tactical atomic weapons.

Other weapons designed specifically by FMC to maim and kill human beings have been produced by FMC's Defense Technology Labs (DTL) in Santa Clara. DTL's recruiting brochure, entitled "Weapons Technology," states

> . . .experience of design and engineering personnel encompasses non-nuclear ordnance from concept through production, including: explosive subsystems for missiles, artillery projectiles, aircraft dispenser munitions, warheads and weapons systems, chemical-biological weapons, analytical studies, and ordnance specialties.

Recent DTL research and development projects include the Bomblet Wide Area Dispersal System, a Modular Firebomb, a destruct mechanism for chemical-biological munitions, the CBU-41 cluster firebomb, an artillery dispersal system, a directed charge fragmentation warhead, and the Jungle Fuse.

One of DTL's most successful and most insidious products is the Beehive artillery projectile, which is designed to explode into hundreds of half-inch darts. The Beehive, called a "patriotic contribution to defense" by the FMC Chairman of the Board, is not in production at the moment, but FMC received nearly $100,000 earlier this year for maintenance of the Beehive manufacturing equipment for future production. And while reductions in defense spending have led to the closing down of the Defense Technology Labs, many of the operations there appear to have been transferred to FMC's Engineered Systems Division in Santa Clara, which recently received a lucrative contract for an anti-personnel mine dispenser.

The Vietnam War is a war against an "enemy" which, according to Lieutenant Calley and other returned soldiers, is not distinguishable from the civilian population. In fact many experts believe that the war must be prosecuted against the entire population of Vietnam. Samuel P. Huntington, Harvard political scientist and buddy of Henry Kissinger, has called the strategy:

> . . . forced-draft urbanization and modernization which rapidly brings the country in question out of the phase in which a rural revolutionary movement can hope to generate sufficient strength to come to power.

According to Huntington, this forced-draft urbanization is accomplished through the "direct application of mechanical and conventional power" such as saturation B-52 raids, napalm, crop destruction, electronic devices which cannot detect political persuasion, and anti-personnel fragmentation weapons, all of which have been proven to be indiscriminate in their application.

FMC's production of the Beehive artillery projectile and cluster bombs is an example of a military weapon which does no structural damage but rather is designed to kill and maim. The Beehive explodes into hundreds of half-inch darts which penetrate only flesh and which must be surgically removed. The effect of the Beehive is to place a tremendous strain on the "enemy's" medical services and to terrorize. Although the stated purpose of the Beehive is to kill enemy soldiers, numerous stories have been reported of civilians being shredded by the darts.

better . . . through chemistry

FMC, through its vast chemicals operations, including the Niagara Chemicals Division, has become a major enemy of the people represented by the United Farmworkers Organizing Committee (UFWOC). Recent progressive contracts won by UFWOC place a permanent ban on the use of dangerous pesticides known as chlorinated hydrocarbons. Of the six banned pesticides (DDT, Aldrin, Dieldrin, Endrin, Kelthane, and Thiodan), FMC makes all except Kelthane.

The Farmworkers have permanently banned these chemicals because of their dangerous effects upon persons who must work with them. Chlorinated hydrocarbons build up in the fatty tissues of the body, and the body does not expel them easily. They have been proven to weaken the shells of birds' eggs, and their effects upon humans, though not completely known, are considered to be dangerous. For this reason, the farmworkers, who suffer most from exposure to these chemicals, have demanded their permanent ban. FMC continues to produce and market these dangerous chemicals, actively lobbying for the loosening of already weak restrictions on their use.

The Farmworkers have also placed restrictions on the use of organo-phosphate pesticides. Organo-phosphates, though not a long-term danger, are very dangerous if humans come into contact with them before the chemicals have decomposed. This is because they contain an anti-cholinesterase agent: a chemical which was developed for use in nerve gases. This chemical breaks down the nervous system's command to relax a contracted muscle, and can therefore cause serious illness and even death by suffocation.

For these reasons, the Farmworkers have sought to have mandatory waiting periods between the time of spraying a field and the time of human entry into the field for harvesting. Following several serious outbreaks of organo-phosphate poisoning last year, the farmworkers' pleas were heeded by the California State Department of Agriculture. A thirty-day waiting period was placed upon several chemicals, including ethion and guthion, which are made by FMC's Niagara Chemicals Division.

FMC, angered by the regulation which threatened to reduce the sales of its chemicals, made a "scientific" study of the chemicals which purported to prove that seven days was a sufficient waiting period. But FMC's study was so lacking in scientific assumptions, methodology, and analysis that the California State department of Public Health (Bureau of Occupational Health) issued a blistering ten-page critique of it, saying in part:

> First, and most basically, the research design was such that it could not and did not test the company's starting hypothesis: namely, that a thirty-day waiting period for ethion is longer than necessary.

The critique went on to state:

> If Niagara had submitted its data to any kind of statistical analysis, rather than merely gross graphical presentation, it could not have concluded that ethion is non-toxic. . . .

> Statistical conservatism, not to mention worker health conservation, dictates a continuation of the State Director of Agriculture's regulations of June 19, given the present state of knowledge.

FMC holds a $56,000 contract with the Defense Department (Defense Supply Agency) for the production of a herbicide, Bromacil. We do not know whether Bromacil is used in the defoliation of Vietnam. Bromacil is a nucleotide analogue, similar in structure to bromauracyl, a verified mutagen. The possibility that Bromacil may cause mutations in the genetic process cannot be discounted.

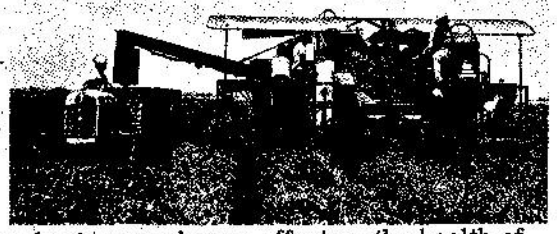
With its ownership of the rights to millions of tons of high-grade phosphate shale, FMC has become one of the country's largest producers of phosphorous, producing over 285 million pounds per year. Through its position of leadership in the production of phosphorous, FMC has increased its marketing from the traditional use in fertilizers to the large-scale use of phosphates in soaps and detergents.

Environmentalists have pointed out that phosphates in detergents, for which FMC makes eight different phosphate products, can be extremely dangerous to lakes and rivers. Phosphates are often the major nutrient which determines the rate of algal growth in water. A high concentration of phosphates in many lakes and rivers has caused an accelerated eutrophication (a process which causes loss of free oxygen), in some cases making lakes uninhabitable for fish.

The danger of phosphates in our water supplies is well documented in the Great Lakes. Yet an official position paper by FMC says that further study is required before any steps can be taken to eliminate phosphates from detergents. Forgetting that industry and its Madison Avenue advertising arm had thrust phosphates upon the public, the position paper states that phosphates "have poured into our waters...now, because of the housewife's demand for clean clothes." FMC, in large part responsible for the introduction of phosphates in detergents, now would like to abdicate its responsibility for that introduction, placing the blame on the housewife.

If and when phosphates are proven to be of harm to the environment (to FMC's satisfaction) then FMC says that the public should pay for m[illegible] of the costs of cleaning up what FMC has done. F[illegible]aving made millions of dollars in profits off the sale [illegible] phosphates, now states that the government should assume its role in this program (study of phosphates) by supplying both manpower and funds."

It becomes difficult to believe that FMC values scientific truth more than profit. In the case of phosphate detergents, and pollution, FMC would have us believe that it will act responsibly as soon as scientific evidence dictates a solution. In the case of organo-phosphates, however, FMC tries to change scientific evidence to show that no hazard exists when, in fact, the hazard is almost undeniable. The Food and Drug Administration has testified before a Senate subcommittee that pesticides used on table grapes alone cause 850-1000 deaths and 80,000 illnesses among workers each year. While such sickness and death are at a high level, FMC continues to resist regulation.



tomato harvester

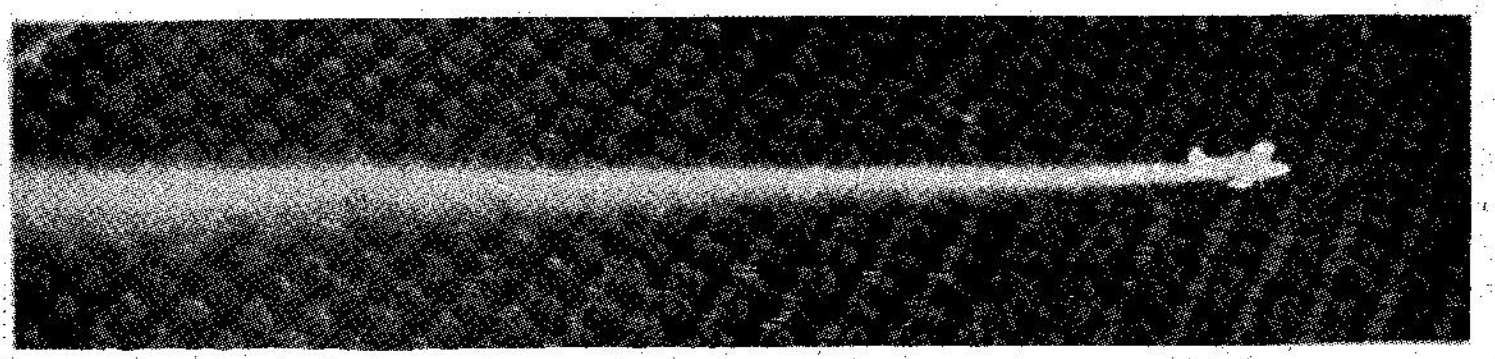
Besides having an adverse effect on the health of farmworkers, FMC has played a critical role in the labor struggle between the farmworkers and the big growers. When the federal government ended the Bracero Program, which severely cut the supply of cheap Mexican labor for the growers, many people hoped that the miserable conditions of the migrant farmworkers would be alleviated through labor negotiations. The big growers, however, had other ideas. They called upon FMC to help them combat the rising labor struggle in tomato harvesting.

According to its public relations magazine, FMC Progress, of September, 1966,

> The men who raise some sixty per cent of the nation's tomatoes faced a critical year in 1965. The end of the so-called 'bracero' program was having its full effect on western agriculture. The flow of farm laborers from Mexico was dwindling away.

So, with the help of the University of California, which developed a new strain of tomato for mechanized harvesting, FMC set about to develop a tomato harvester to replace cheap Mexican labor for the growers. Thus the growers would be able to avoid reaching an equitable agreement between American migrant farmworkers and themselves.

When the struggle between growers and the farmworkers expanded to grapes, FMC stepped in to develop a "grapeshaker" which would help the growers avoid reaching any settlement on fair wages for the farmworkers. The growers, even with FMC's aid, could not smash the strike. But now they are attempting to replace union labor with machines, eliminating the costs of union wages.



Who's in Charge Here

Paul Davies, FMC Board Chairman for nearly thirty years, has said that his other corporate connections "have been very rewarding for FMC because of the ideas and contacts I've acquired."

Below is a partial list of directorships, trusteeships, and other affiliations of FMC's directors.

James M. Hait - Chairman of the Board

- Arthur D. Little
- Association of U.S. Army
- Bay Area Employment Council
- Georgia Pacific
- Interpace Corporation
- San Francisco Bay Area Counci.
- National Industrial Conference Board
- Pacific Gas and Electric
- San Francisco Bay Area Council
- Santa Clara School of Business Administration
- Stanford Graduate School of Business
- Varian Associates
- Wells Fargo Bank

Jack M. Pope - President

- Crocker Citizens National Bank
- Philadelphia National Bank

Paul L. Davies - former Chairman of the Board

- Business Council
- Caterpillar Tractor
- International Business Machines
- Lehman Brothers of New York
- Southern Pacific Railroad
- Stanford Research Institute

R. C. Becherer

- Illinois Bank and Trust
- Illinois Institute of Technology
- Illinois State Chamber of Commerce
- University of Illinois

H. L. Byrd

- Farm Equipment Institute

B. C. Carter

- Bank of California
- Menlo School and College
- Western Pacific Railroad

J. D. Crummey

Paul L. Davies, Jr.

- Pillsbury Madison and Sutro

Russell Giffen

- Pacific Gas and Electric

A. H. Gordon

- Carnation Company
- Commercial Credit Company of Baltimore
- Harris-Intertype Corporation
- Kidder-Peabody and Company

W. H. Hewlett

- California Academy of Science
- Chase Manhattan Bank
- Chrysler Corporation
- Overseas Development Council
- Rand Corporation
- San Francisco Bay Area Council
- Stanford University

Gage Lund

- Standard Oil of California

R. H. Malott

- Citizens Bank of Abilene
- Data Documents Inc.
- RCL Electronics Inc.
- University of Kansas Endowment Association

D. C. Oskin

- National Plant Food Institute

E. T. Nielsen Jr.

- American Ordnance Association
- Association of U.S. Army
- Defense Industry Advisory Council - subcommittee for military exports
- First National Bank of San Jose

C. F. Prutton

S. L. Sibley

- College of Business Administration - University of Santa Clara
- Del Monte Corporation
- National Power Survey of Federal Power Commission - advisory council
- Pacific Coast gas associations
- Pacific Gas and Electric
- Stanford Research Institute

R. C. Tower

- American Management Association
- Harvard Advisory Management Association
- Harvard Business School Association

conclusion

Profits are not an end in themselves. They are just an indication of whether you are rendering service to the consumer. If there are no profits, there are no social benefits.

Bart A. Van Eck
Vice-President and
Treasurer, FMC Corp.

If one is to believe Mr. Van Eck, FMC has rendered great social benefits to the people of Santa Clara County, the State of California, and the rest of the world. Though FMC's profits are declining, the company remains respectably profitable. Forbes reports for fiscal 1970 that FMC returned 10.9% on stockholders' equity. During the major period of Vietnam escalation, 1963-68, FMC averaged an annual return of 16.9%. Net income rose phenomenally from $33 million in 1963 to $75 million in 1968. FMC's diversified sales promise to tide the company through the Vietnam-induced recession and defense cutbacks.

Yet FMC's profits do not coincide with public service. In its war production, its production of chemicals dangerous to man and his environment, and its production of equipment to put people out of work, FMC is producing against the public interest.

This pamphlet was prepared by members and friends of the Pacific Studies Center, a non-profit cooperative research organization in East Palo Alto. The views expressed in this publication are those of the authors and do not necessarily represent those of the Pacific Studies Center.

In preparing this pamphlet, we were unable to collect much information on working conditions at FMC, wages, or the attitudes of employees toward their work. We consider this a serious deficiency and would appreciate hearing from people who have such information.

Additional copies are available from PSC, but contributions are needed to cover printing expenses. Contributions to PSC are tax exempt.

The Pacific Studies Center regularly publishes (bi-monthly) Pacific Research and World Empire Telegram, providing documented analysis on the political economy of the Pacific Basin. Subscriptions (for twelve issues) cost $5.00 for individuals and $15.00 for institutions.

Inquiries, contributions, and orders should be addressed to:

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Written by Lois Lane, Robert Barkan, Adam Bennion, and Leonard Siegel--April, 1971.

SOURCES

Armed Forces Journal ; October 5, 1970

Armed Forces Management ; October 1968

Business Week ; "Giant that makes almost anything;" March 9, 1963

"Community Studies on Pesticides;" California State Department of Health; December 15, 1970

Chemical and Biological Warfare ; Seymour M. Hersh; 1969

Economic Concentration Part 8A ; "Economic Report on Corporate Mergers;" Committee of the Judiciary; United States Senate

Farm Chemicals; "Why Niagara is acting like an ambitious rookie;" May 1969

FMC Annual Reports

FMC Press Releases ; May 1961, May 1968

FMC Progress

Forbes : January 1, 1969; December 5, 1970; Jan. 1, 1971.

Fortune; "Carrots to Chlorine;" June 1951

Infantry; September-October 1968, July-August 1969

Investor's Reader; "FMC Spells Out Growth Formula;" September 22, 1965

Jane's Weapons Systems; 1970

Midpenninsula Observer ; March 31, 1969

New York Times ; February 9, 1971

San Francisco Examiner;

San Francisco Examiner ; January 2, 1968

San Jose Mercury ; January 22, 1971

San Jose News ; September 23, 1970

Wall Street Transcript ; December 11, 1967; June 14, 1968