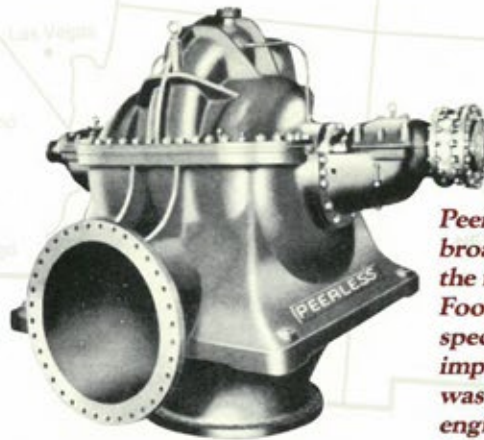


1934

Pump sales rose 200 percent.

Food Machinery Corporation is the world's largest manufacturer of machinery and equipment for the handling of fruits, vegetables, milk, fish and meat products from the time the commodity comes from the orchard, field, farm, or sea until it is packed or canned ready for the consumer. The principal business is furnishing modern labor-savings machinery for these purposes...

—1935 Annual Report



Peerless Pump immediately broadened and strengthened the farm machinery side of Food Machinery. In retrospect, however, the most important Peerless acquisition was James M. Hait and the engineering department he headed.

Food Machinery established a combined export department in 1929 with offices in New York and San Francisco. In 1930 the company published a 240-page General Export Catalog, complete with a one-page questionnaire on canning equipment.



Book I

FMC TAKES SHAPE: THE FOOD MACHINERY ERA 1929-1940



The fruit or vegetable is picked at peak condition . . .



washed, then FLAVORSEAL PROTECTED in the packing house . . .



packed and shipped to market, with shrinkage retarded by FLAVORSEAL . . .



reaches the consumer almost as "fresh as the day it was packed" and stays fresh days longer than unprotected fruit.

"Food Machinery plays Elizabeth Arden to millions of Florida oranges..."



By the end of the 1930s, Davies' growth philosophy was readily apparent: Identify and remedy weaknesses in Food Machinery's existing businesses while opportunistically entering related new businesses.



"Food Machinery is, superficially at least, one of the oddest collections of industrial goods and services ever assembled under one corporate roof!"



Economic hard times persisted into 1939, and the company's performance would not substantially improve until the outbreak of World War II.



Book I

FMC TAKES SHAPE: THE FOOD MACHINERY ERA



The merger of the John Bean Manufacturing Company and Anderson-Barngrover Company, and the subsequent acquisition of Sprague-Sells Corporation, put Food Machinery in a strong position to take advantage of dramatic changes on America's farms and ranches.

Although many farmers still operated small family truck farms, enterprising growers, especially on the West Coast, were establishing what later would be called "agribusinesses." A spate of innovations—the introduction of improved seed strains and chemical fertilizers, the development of mechanized equipment such as the diesel tractor, the availability of electric power and increasing use of irrigation—all made large-scale agriculture more feasible and profitable.

Mirroring the increasing size and concentration of American farms was a consolidation of small canneries, packers and shippers. For example, Calpak—California Packing Corporation, a merger of four of California's leading canners, packers and shippers—operated 71 canneries and fruit packing plants in California, the Pacific Northwest and the territories of Alaska and Hawaii, and marketed its products under the Del Monte label.

Davies and Crummey set out to make Food Machinery Corporation the premier supplier of specialized machinery, equipment and processes to this new breed of food company.

With Food Machinery already established as the world's leading manufacturer of equipment for processing fruits and vegetables bound for canning, Davies targeted another key food industry market: processing fresh produce bound for grocery store shelves. The most promising crops appeared to be citrus fruits, and Davies concluded that the best way to enter this field quickly was to find a reputable firm and buy it.

In May 1929 Davies found what he was looking for: Stebler-Parker Company, the world's largest manufacturer of equipment for the citrus packing industry. Founded in 1898, the Riverside, California-based company produced a complete line of fruit handling and packing equipment, including the automatic box stacker and conveyor, citrus washers and absorbers, sorting tables, fruit weighers and sizers. It had a firm grip on a specialized market, servicing at that time an estimated 90 to 95 percent of all citrus packed in California.

Four months after acquiring Stebler-Parker, Davies completed negotiations for the acquisition of four more fruit handling machinery companies. One of them—Florida Citrus Machinery Corporation, with a plant in Dunedin, Florida—manufactured citrus handling machinery under Stebler-Parker patents. Florida Citrus produced approximately 95 percent of the citrus packing-house machinery used in the state of Florida. Once in the Food Machinery fold, it was renamed the Florida Division.

Another new addition to the Food Machinery Corporation was Cutler Manufacturing Company of Portland, Oregon, the premier manufacturer

Chapter 4

FILLING OUT THE FOOD MACHINERY LINES

OF PEACHES

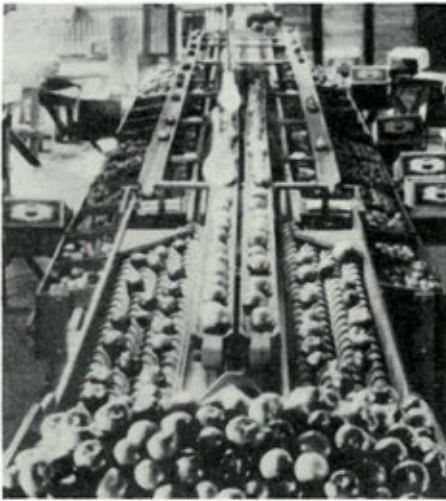
Food Machinery was intent on filling every specialized canning requirement.

Peach canners, for example, still removed the pit from cling peaches by hand—an expensive and time-consuming process. While firmer-fleshed cling peaches were preferred for canning, their pits did not separate easily from the flesh.

Al Thompson and his staff focused their collective talents on developing a peach-pitting machine, and in 1931 they unveiled a mechanical pitter that in a single operation sliced the peach in half and scooped out the pit, leaving perfectly smooth surfaces.

About the same time, Calpak acquired a firm with a similar pitter. To settle patent disputes, Food Machinery, Calpak, and Libby, McNeil and Libby formed a joint venture—Pacific Machinery Co.—to handle the ownership and leasing of the new machines. By 1933 one-third of all the peaches canned in California were being processed on these machines.

A mechanical pitter could process 17 to 18 40-pound boxes per hour and used less floor space. Moreover, as the 1935 Annual Report observed: "a good machine operator can be trained in a few hours as compared with the two or three years necessary to train a good hand-pitter."



(Top) Major shippers of fresh tomatoes relied on the Cutler Weight Principle Sizer that sized fruit by weight.

(Bottom) A new Sprague-Sells plant in Hoopeston, Illinois, employed labor-saving machines used to manufacture high-grade canning machinery including the Peerless Super corn husker, the Universal corn cutter and the new Cloverleaf pea grader.

of washers, graders, sizers and sorters for the deciduous fruit industry. Founded in 1912 in Hood River, Oregon, Cutler had revolutionized apple and pear packing with its Cutler Weight Principle Sizer, which replaced the old method of sizing fruit by diameter with a method based on weight. It also produced flexible curtain sizers, fruit washers and dryers for removing spray residue, fruit wipers, box-lidding presses, and gravity and power belt conveyors.

Two smaller firms rounded out the group: the Vernon Edler Corporation of Los Angeles, which had been associated with Stebler-Parker and owned valuable auto laundry patents; and Roberts & Huntington of Anaheim, California, manufacturers of specialized citrus machinery. These two operations were grouped with the Stebler-Parker Company to form the Citrus Machinery Company, a division now fully equipped to meet the demands of California's citrus packing houses.

Although this flurry of acquisitions dramatically increased the company's geographical and industrial base, it also posed new coordination and management challenges. Davies at first considered consolidating the manufacturing operations of the old John Bean and Anderson-Barngrover plants on West Julian Street in San Jose—in fact, it was announced as a *fait accompli* in the 1930 Annual Report—but he soon abandoned the idea. Although he saw benefits in consolidating operations, he probably was met with stubborn resistance from the divisional management. Davies would continue to grapple—not always successfully—with the choice between consolidation and decentralization throughout his years of leadership at FMC.

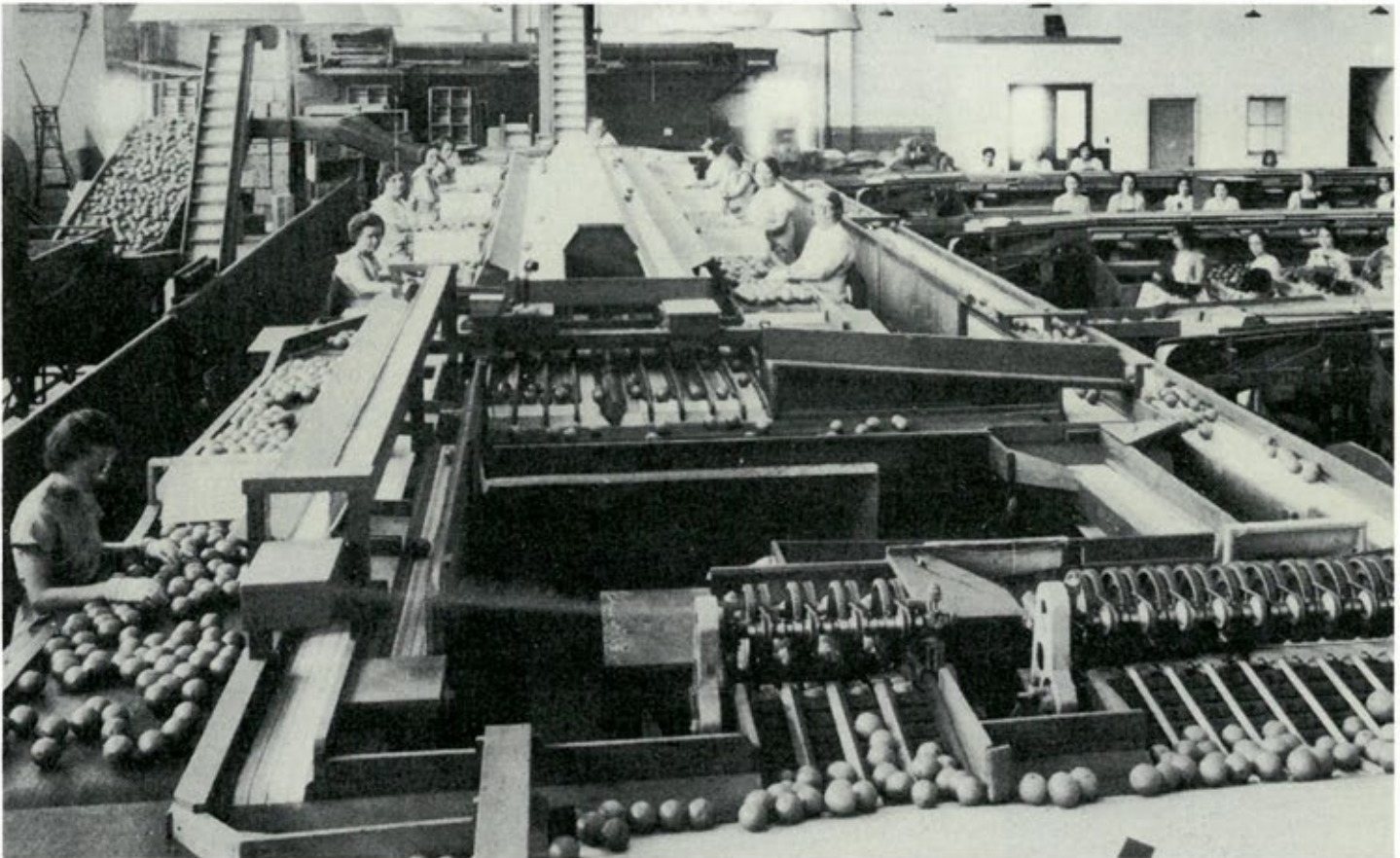
Sprague-Sells offered a small-scale experiment in consolidation. Its two plants in Buffalo, New York, and Hoopeston, Illinois, had become the company's canning machinery Eastern Division. But with the Depression affecting profits, it made economic sense to consolidate the two plants at a single location.

"Where to locate was a big question," wrote Sprague-Sells' Cliff Wilson, who, after the merger with Food Machinery was named manager of the Buffalo plant. "So each plant manager was to submit reasons for moving to his location." Buffalo had several advantages over Hoopeston: a larger pool of trained mechanics, a modern plant and better rail service. "Our labor rates were higher," confessed Wilson, "but we countered that we were more efficient." The final test for each plant was to submit drawings to the other plant and that plant would submit an estimate. Buffalo won hands down.

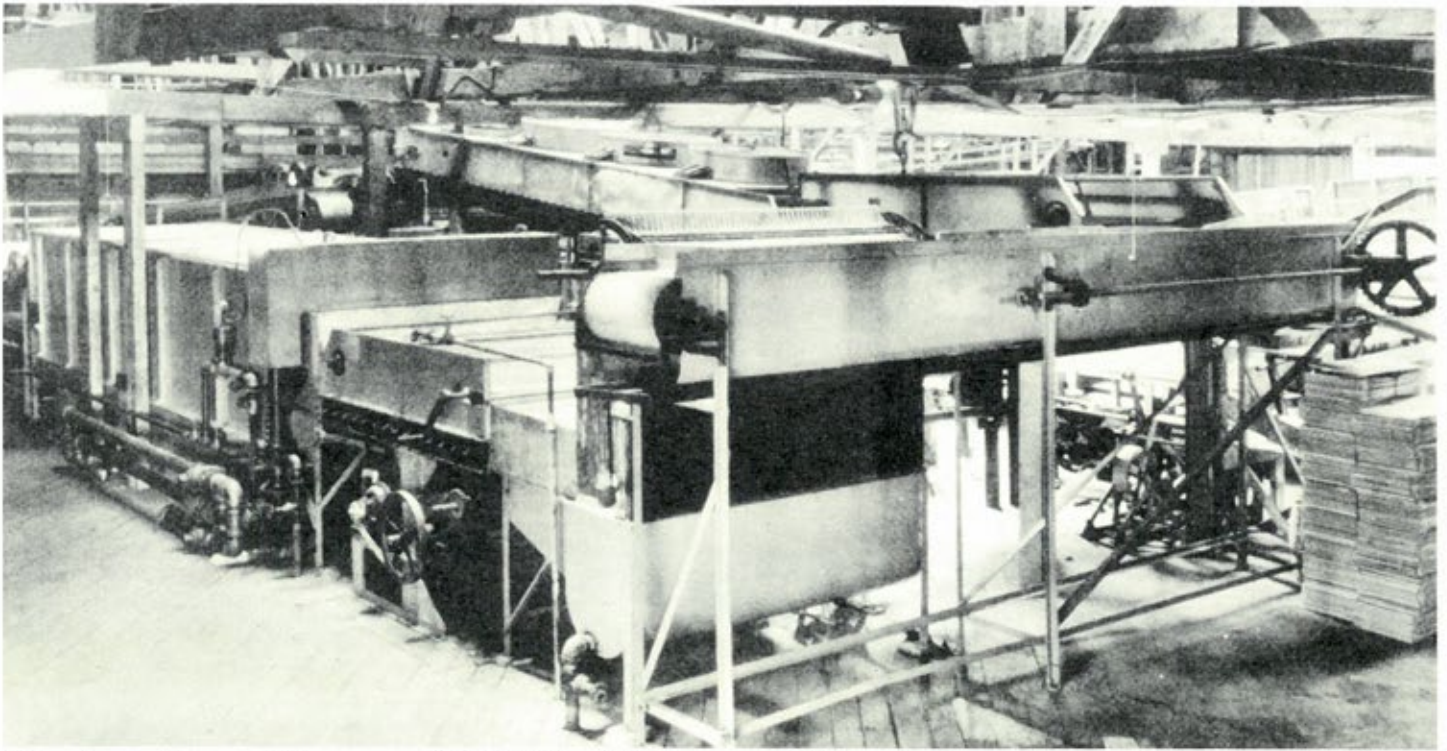
But Hoopeston, hard hit by the Depression and now threatened with the loss of additional jobs, was determined to keep FMC from leaving. Ed Trego, a prominent Hoopeston businessman, traveled at his own expense to San Jose and pleaded with the board of directors to keep the plant in Hoopeston. Davies set a condition that he probably assumed Trego could

never meet: FMC must receive a payment of \$75,000 within three days to remodel and expand facilities. Trego promptly organized a local fundraising drive, and the citizens of Hoopeston met the challenge—and kept their plant.

The physical facility at Hoopeston was inadequate to house the combined operations, and construction began immediately on a modern, efficient plant. It was completed in 1932, and boasted, according to the company's 1935 Annual Report, "labor-saving machines arranged along continuous lines permitting the manufacture of high-grade canning machinery at a minimum of cost." These machines included the Peerless Super corn husker, the Universal corn cutter for cream-style or whole-grain corn, and the new Cloverleaf pea grader. ■



FMC's Citrus Machinery Company was fully equipped to meet the demand of California's citrus packing houses.



This color applicator-sterilizer was part of FMC's Color-Added process, which introduced a small amount of edible dye to the skins of oranges to enhance their color.

THE FLAVORSEAL PROCESS



The fruit or vegetable is picked at peak condition . . .



washed, then FLAVORSEAL PROTECTED in the packing house . . .



packed and shipped to market, with shrinkage retarded by FLAVORSEAL . . .



reaches the consumer almost as "fresh as the day it was packed" and stays fresh days longer than unprotected fruit.

The acquisition of Stebler-Parker in 1929 involved Food Machinery in a new aspect of the food business: improving the appearance of fresh fruits and vegetables.

Stebler-Parker owned the patent rights to a hypochlorite fruit-treating process, which Food Machinery marketed as Hypo-Clor. It involved bathing citrus fruits in a solution of active chlorine salts that inhibited mold.

Several years later the company licensed a process called Color-Added, which introduced a small amount of edible dye to the skins of oranges to enhance their color. As many as 75 percent of all oranges raised in Florida and Texas were still green when ripe, and green oranges had less market appeal. As *Fortune* reported in 1947: "Food Machinery plays Elizabeth Arden to millions of Florida oranges, providing them with a legally approved, dyed outer glow to match their inner but not always visible ripeness."

Originally developed by the U.S. Department of Agriculture, the process used a certified coloring solution, which was applied only to fruit that had already passed federal and state tests for juice content and ripeness. The fruit was first thoroughly washed, then dipped in the color bath, rinsed, dried and waxed to seal in the flavor.

"Color-Added was basically John Crummey's baby," recalled Howard Shannon, who joined Food Machinery as a salesman in 1928 and would later manage the Florida Division for many years. "Mr. Crummey literally went into the markets with samples of colored oranges," Shannon said, "to show the benefits that would come from the process."

Citrus packing houses eagerly embraced the new process. Leased at the cost of a few cents for every box of fruit treated, Color-Added soon became a major contributor to the Food Machinery balance sheet as well.

Meanwhile, Food Machinery engineers and salesmen were helping food industry customers expand another fresh produce market: cantaloupes. These fruits present a particular challenge to growers because cantaloupes—unlike apples, pears or bananas—do not gain any more sugar content once they are picked. Cantaloupes, therefore, had to be picked at what was called "hard ripe," leaving little time for the fruit to be transported to distant markets.

University researchers and melon specialists had finally succeeded in developing a cantaloupe that was resistant to mildew—the bane of melon growers' existence. But Resistant 45, as the new strain was called, would hold its flavor and appearance only if picked at full maturity.

Food Machinery set out to find a wax coating that would keep the ripe fruit from drying out and rotting before it reached grocery store shelves across the country.

After exhaustive and often frustrating experimentation, Art Kalmar, chief chemist at Riverside Division, came up with a paraffin suspended in a

Chapter 5

ENHANCING NATURE



**LEASING—FOOD
MACHINERY'S
"BALANCE WHEEL"**

The leasing end of the business—which included the very successful milk sterilizing equipment and the high-speed, automatic peach and pear canning machinery—was, in fact, so profitable that it came close to carrying the entire company single-handedly through the worst of the Depression. The 1935 Annual Report stated that more than half of the nation's evaporated milk production was being sterilized by Anderson-Barngrover Division milk lines; more than half of all the oranges produced in Florida were being treated with Color-Added; and a substantial portion of all the pears and peaches canned on the West Coast were peeled, pitted, stemmed and halved on Food Machinery equipment.

Income from the leased machinery increased in all but one year from 1929 to 1939. In 1938 royalties increased 14 percent to a new high of \$1.4 million, and in 1939 they shot up 25 percent to more than \$1.7 million. In just 10 years, leased income grew fivefold. By way of comparison, total company sales grew only 14 percent during the same period.

"Leasing," observed Fortune in 1947, "is (Food Machinery's) balance wheel. In years when commodity prices go down, consumption increases, and Food Machinery's unit-rental incomes hold their own. Few companies can claim such a depression-proof line."

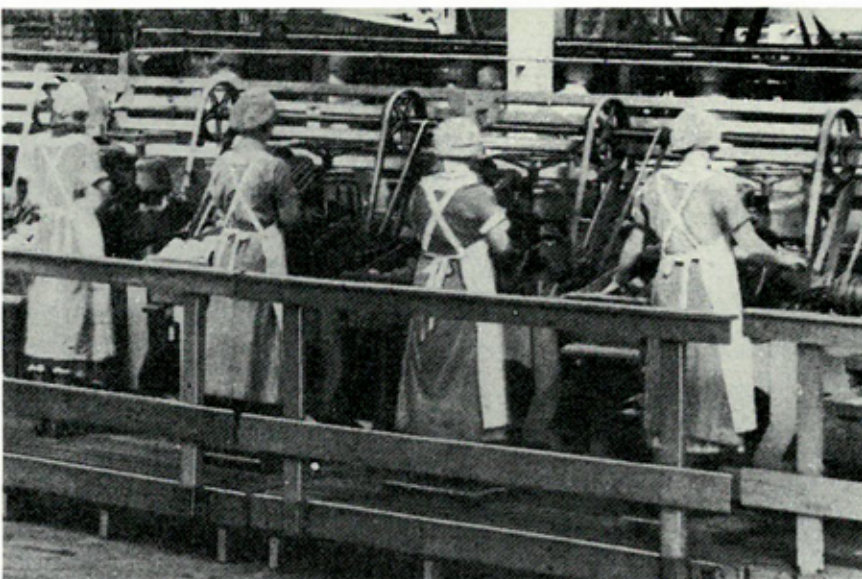
solvent that could be sprayed on the cantaloupes as they rolled along a belt. By the time the fruit reached the end of the belt, the solvent had evaporated, leaving behind an even coat of wax.

Marion Barnes, a Food Machinery salesman who had taken Color-Added and other processes worldwide, soon realized that the same process might be applied to other fruits and vegetables. Recently transferred to Harlingen, Texas, as processing manager and assistant divisional manager, he turned his attention to tomatoes. After experimenting at length with different solvents, various wax formulations and orifice sizes, he found an improved solvent and better grade of paraffin, and determined that tomatoes required less wax than did cantaloupes. "The experiments turned out very well," he recalled, "so I signed up five large houses in Texas before we actually had a unit."

The Spray Wax process was used on bell peppers and cucumbers as well, with each variety of produce requiring its own blend of waxes and solvents.

By the late 1930s, Spray Wax was beginning to sound too pedestrian for so successful a process. "Several of us submitted names for the new wax," Barnes recounted. "Frank Cutler from Cutler Manufacturing submitted the name *Flavorseal*, and that was the winner."

Flavorseal, like Hypo-Clor and Color-Added, was a leased process, furnished on a service charge basis with equipment and materials supplied by Food Machinery, which also provided all the maintenance and supervision. (For tomatoes, for example, the company received three cents per 30-pound lug.) It soon became one of the company's most successful products. ■



In 1935, a substantial portion of all the pears and peaches canned on the West Coast were peeled, pitted, steamed and halved on Food Machinery equipment.