

Dairy Products

California's manufactured products in relation to those of other areas

R. G. Bressler, Jr.

The manufactured dairy products market experienced the sharpest break in history between July of 1948 and July of 1949.

The price of butter in San Francisco dropped 28%; San Francisco cheese prices fell off 39%; the prices received by condenseries in this region for canned evaporated milk declined 22%; and the prices of nonfat dry milk declined 26%. The break in product prices was accompanied by a sharp reduction in prices received by farmers for milk delivered to manufacturing dairy plants.

California farmers are taking an active interest in the operation of the marketing and pricing system and the relation between the prices of dairy products in California and prices in other states.

A substantial, though declining proportion of the total milk production in California is used in the processing of dairy products. In 1940, commercial milk production in the state totaled 4.5 billion pounds. Of this total, 2.1 billions were used as market milk and cream and 2.4 billions went into manufactured dairy products. By 1948, commercial milk production had increased to 5.4 billion pounds, market milk and cream accounted for 3.1 billions, and manufacturing uses totaled 2.3 billion pounds. The war and postwar years, while characterized by a nearly constant production of manufacturing milk, brought a decline in the relative importance of manufacturing uses from 53% of the total in 1940 to 43% in 1948. In spite of this relative decline, it should be clear that the manufacturing milk market is very important to the dairy industry of the state.

During the past year, California produced 40 million gallons of ice cream, 28 million pounds of butter, 9 million pounds of whole milk cheese, 324 million pounds of evaporated milk, 14 million pounds of whole milk powder, and 37 million pounds of dry nonfat solids for human consumption.

The output of evaporated and dried milk products was larger than the amounts consumed within the state, and surpluses amounting to some 40% of evaporated milk production and 80% of the output of whole milk powder were available for shipment to markets outside the state. Local production of butter and cheese fell far short of meeting consump-

tion requirements, and approximately 70 million pounds of butter and 60 million pounds of cheese were obtained from other states. In terms of the total amount of milk used in all milk and dairy products, California was dependent on out-of-state supplies to satisfy a net deficit amounting to one quarter of total consumption requirements.

The dairy industry of California is not self-contained but is dependent on the industry in other parts of the country. Local butter and cheese are sold in California markets, but in direct competition with butter and cheese shipped from other states. Local surpluses of evaporated and dried milk must be shipped to out-of-state markets where they also are in direct competition with products from other states.

Reported receipts of butter and cheese in San Francisco and Los Angeles indicate the wide geographic extent of the dairy products markets. Yearly receipts of butter in these two cities averaged 53 million pounds during 1946-1947. About one quarter of the receipts came from points in California, one quarter from other western states, and one half from the manufacturing dairy states of the Midwest. Idaho, Nebraska, and Iowa were the most important single states, but shipments were received from a total of 22 states.

Cheese was also shipped to these two cities from a wide area, with California accounting for 10%, other western states 35%, and the Midwest for 55% of the total of 42 million pounds per year. Oregon and Idaho were the most important western sources, but Wisconsin was by far the most important single state and shipped more than one third of all cheese received in these markets. In all, cheese was received from 20 western and central states.

Such movements of dairy products among states and regions serve to keep prices in line throughout the country. When the price system is operating normally, the price of butter in San Francisco will be about equal to or a little higher than the price at creameries in Iowa or Nebraska plus the costs of handling and shipping butter from those states to San Francisco. So long as this is true, it will be profitable for creamery operators to make such shipments.

If the San Francisco price should drop below this level for any length of time, it would be more profitable for the Midwest to divert supplies to other markets. This would reduce the amount of butter received in San Francisco, and the reduced supply would force up the price until it was again profitable to ship to this market. An abnormal increase in the San Francisco price would make it attractive to ship more butter to this market, market receipts would increase, and prices would be forced back to the normal relationship.

An examination of prices reported in the major cities of the United States indicates that the dairy products markets have followed this normal pattern fairly closely.

During the first months of 1949, the price of 92-score butter in San Francisco averaged about four cents per pound above the price in Chicago. Since freight rates from Iowa to San Francisco were 2.1¢ a pound higher than from Iowa to Chicago, this price difference made it profitable to increase shipments to San Francisco. This forced prices down, and during the spring and summer months the average price difference was only a fraction of a cent per pound above the freight differential.

Prices in these two markets move closely together, and since 1930 the average price difference has exceeded the freight cost differential by only one quarter of a cent per pound of butter.

The same general situation holds for other butter markets and for other manufacturing dairy products.

Since 1930, the yearly average price of butter in New York has ranged from 0.5¢ to 1.2¢ and averaged about 0.8¢ a pound above the Chicago price, as compared to a freight differential of about

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Excel Onion

**early maturing and of high quality,
new variety proven good producer**

H. A. Jones, Bruce A. Perry and Glen N. Davis

Producing 35% more onions of high quality 10 to 14 days earlier than conventional Yellow Bermudas, with fewer bolters, doubles and splits, off-colors and other undesirables, is the record of Yellow Bermuda 986.

Extensive tests by commercial growers and seed producers in southern California and south Texas have proved its merits.

The 986 was derived from a single plant and developed coöperatively by the United States Department of Agriculture, the Texas Agricultural Experiment Station, and the California Agricultural Experiment Station. It showed such early promise that it was released to selected growers of the seed trade.

Trials in 1946

Seed grown in the Imperial Valley was sent through various State agencies to onion growers for extensive commercial trials in 1946.

Near El Centro, 12 acres of 986 were seeded directly on raised beds on October 25, 1945. Harvested April 3rd to 17th, they yielded 6,043 50-pound bags of onions, or an average of 503 bags per acre. Bolters were 25% to 30% but as the market was strong, these were topped and sold.

On an adjoining field a second planting of 30 acres was made November 2, 1945. Harvested April 17th to 24th, it produced 16,627 50-pound bags, or 554 bags per acre. In this second planting, less than 2% were bolters.

On the basis of a one-year test, November 1st seems to be about the right time to plant 986 in the Imperial Valley to produce bulbs without transplanting.

For the first time, the growers in the Imperial Valley could market onions on the West Coast about the same time as the Texas growers.

Where accurate comparisons could be made, 986 had a lower percentage of bolters and was practically free from splits, doubles, pink flesh, and other off-colors. It was uniform in size, shape, color of bulbs, and time of maturity, and ripened 10 to 15 days ahead of other strains.

One peculiar trait of 986 observed in all locations was the ability of bolters to become good-sized, well-shaped onions.

Though not a storage variety, 986 keeps better in storage than other yellow Bermudas tested—an advantage in holding bulbs for seed purposes. Yellow Bermuda 986 is especially crisp and mild in flavor, making it a very desirable salad onion.

An important feature of 986 is its early maturity. To maintain this early maturing habit it is important that the onion bulbs for the production of stock seed be selected in the South. The place of seed production is not important, but the place where onion bulbs are selected for the production of stock seed is extremely so.

Preliminary tests indicate that 986 is not a good transplant crop for the North, since its extreme earliness causes it to mature while the bulbs are still small.

Test Results

The following results obtained by growers in California indicate what may be expected of Yellow Bermuda 986.

On trial grounds at El Centro, 986 was seeded directly on October 26, 1945; 5% bolted, and there were no doubles or off-colors. The adjoining row of Yellow Bermuda, planted at the same time, was about 10 days later and had 30% bolters and 50% splits and doubles.

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0.6 cents. Average prices in Los Angeles have ranged from 0.6¢ above to 0.7¢ below the San Francisco price, but over a period of years the difference has amounted to only 0.1¢ a pound.

Cheese prices, while more difficult to compare because of differences in qualities and grades for which quotations are made in the major markets, move very closely together.

Evaporated milk prices are reported on a regional rather than a market basis, but again the prices in the various parts of the country move up and down together almost perfectly.

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The relation between dairy product prices and prices paid farmers for milk will be discussed in the January issue.

Yellow Bermuda 986 planted in four large field test plots near Bakersfield matured 10 to 14 days ahead of the early variety generally grown there, but yield was only about 60% of that produced by this check variety. The percentage of bolters was low, but a high percentage of doubles appeared near Shafter. Despite its early maturity, 986 was not early enough to compete for the early market.

In the Coachella Valley, near Indio, Yellow Bermuda 986 was compared in several locations with Texas Grano and Crystal Wax.

It matured about two weeks before either of these two varieties, with no doubles or bolters apparent.

Average yields per acre in 50-pound sacks were: Texas Grano, 750; Yellow Bermuda 986, 528; and Crystal Wax, 480.

Six selected 986 bulbs weighed 2.5 pounds, whereas six of Texas Grano weighed 3.5 pounds.

Yellow Bermuda 986 attained excellent size and quality, and can be recommended for planting in the Coachella Valley.

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CORN

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observation led to further inquiry. If the hybrids showed varying degrees of susceptibility, the inbred lines which are used as parents should also vary in their reaction to this disease. Over 70 inbred lines obtained from corn belt experiment stations have been tested over a period of two years, grown under conditions best suited to the *Fusarium* fungus. In order to get a severe test of susceptibility, spore suspensions of the fungus were sprayed on the silks of the corn. At harvest time the effect of the disease was noted. These tests indicated that there are differences in the susceptibility of inbred lines. A large proportion of the lines tested, that were obtained from the California variety King Philip Hybrid, were in the more resistant class. The work has progressed one step further. Crosses of inbred lines with varying degrees of susceptibility have been made in all possible combinations. From this type of study it is hoped that a hybrid corn combination will be found which will have the necessary qualities for profitable yields with *Fusarium* resistance added, a tailor-made hybrid combination, particularly adapted to California.

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