

# CHANGING LOCATION FACTORS IN THE LOS ANGELES MILKSHED\*

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The dairying industry of the Los Angeles Basin is one of the most heavily capitalized agricultural industries in the world today. Land values for dairying purposes are commonly about \$20,000 per acre and may reach as high as \$90,000 per acre. The investment per cow, exclusive of land, usually averages about \$1,000 per animal. The herds usually number more than 200 cows per farm on land holdings of about fifteen acres each. Finally, these metropolitan dairies produce milk at a retail price lower than that of the highly-praised West Coast Marine dairying areas farther north, or most metropolitan areas of America's agricultural hinterland.

From this brief introductory description of the Los Angeles milkshed, the indication is that dairying here is nearly unique. The purpose of this study is to ascertain the stability of this form of enterprise. The general approach takes into consideration these principal elements:

1. What factors operable at the time the industry was established exist today?
2. What factors operate to maintain a concentration of the dairy industry within its present location?
3. What factors tend to contribute to a dispersal of the industry?
4. What alternative locations obtain in the surrounding area, and what is the nature of the attraction of these locations?

Prior to World War II Los Angeles dairies were widely dispersed throughout the Los Angeles Basin. Large clusters of dairies were scattered over the Basin<sup>1</sup> in areas such as Torrance, Artesia, El Monte and the San Fernando Valley. During this earlier period much of the feed and fodder was available from the local area which was not occupied by the series of nucleated settlements which dotted the floor of the Basin. At that time dairies usually occupied the less valuable land, that which was not suited to citrus or market garden vegetables. It is only since the population explosion which followed World War II that uncontrolled urban sprawl spread out from Los Angeles, and to a lesser degree from the other larger urban communities within the Basin, to occupy the land to the extent that

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\* The information from which this paper was developed came from a wide variety of sources. Interviews were carried on with farmers throughout the entire milkshed; transport media, lending agencies, and service companies supplied much useful information, and cost studies prepared by the Milk Producers' Council were of inestimable value. Finally, a critical reading of the paper by Donald Patton of the auditing firm of Fraser and Torbet helped to eliminate errors which may not otherwise have been discovered.

<sup>1</sup> The metropolitan areas of Los Angeles and Orange Counties, roughly centering on the Bellflower-Artesia area will hereafter be referred to as "the Basin," while the other locations indicated on the map (Fig. 1), namely Chino-Ontario, Hemet-San Jacinto, Bakersfield and the Antelope Valley will be classified as the "outlying areas."

it does today. It was this sprawl that filled the interstitial spaces between the population nodes and displaced the scattered dairies.

The result of this displacement was to develop a sort of leap-frogging movement in which those dairies located nearest to the metropolitan centers of population shifted to the periphery of farthest frontier of the producing area. This relocation tended to concentrate the dairies in the vicinity of Artesia and Bellflower. The choice was a fortunate one. Land values were not high since most of the land did not contain top orchard or agricultural soils. Despite the fact that the region was semi-rural, it was within easy hauling distance for the transportation technology of that time. It was near the Long Beach-Los Angeles Harbor for low-cost importa-

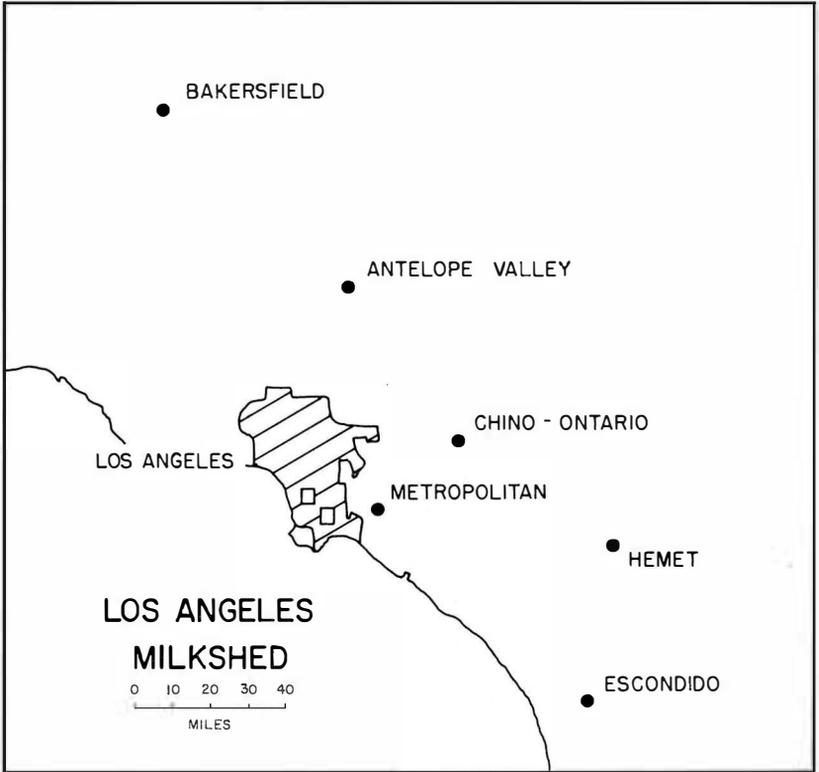


Fig. 1

tion of feed grains and had good access to the alfalfa-growing districts even before the development of the present freeway system. Finally, the tempering effect of the nearby ocean kept temperatures at what were believed to be near the optimum level for dairy production. The effect of this movement of dairies was to create a concentration such as had never existed before in the Basin. The effect of concentration was to make possible an efficient specialization which imparted an increasingly industrial tone to dairy operations.

Although dairying within the Bellflower-Artesia area may be historically credited to fortunate environmental and locational factors, it is now constantly assailed from all sides by forces which threaten to pre-empt the site which it occupies. The tenacity with which it continues to occupy land within what has become an urbanized zone indicates that it comprises a highly competitive and seemingly stable form of land use.

The evaluation of the stability or lack of it in an industry is usually dependent upon the efficiency of the operation of the firm or the advantages that are inherent in different locations. In this study no attempt is made to assess individual firm efficiency. Instead, an attempt is made to establish the differentiation of efficiency with relation to location within the milkshed.

It is within the Basin that dairying most nearly resembles industry in its *modus operandi*. This district has attracted to itself a whole series of specialized services, each of which contributes to the efficiency of the center. Hay and grain dealers, veterinarians, equipment handlers, specialized financing organizations, cattle brokers and a pool of skilled labors are all available within a few miles or a few minutes time.

The need for immediate adjustments toward the area of greatest efficiency is diminished by the fact that prices of dairy products are administered under California milk marketing Laws. However, in an industry with but a few marginal producers, the desire to maximize income may produce the same effect. To quote John Ise, "Man no longer works for bread, but for the jam on bread."

In order to minimize costs and maximize "jam," production usually takes place within the "least cost" location. Any attempt to assess the most desirable location must therefore ascertain what are the major costs, and establish whether there is a differential between the Basin and the outlying areas (Table 1).

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**Monetary Cost Per Pound of Butterfat Produced<sup>2</sup>**

Grain .....	\$ .39	Labor .....	.18
Hay .....	.35	Herd Replacement .....	.09
Green Feed .....	.03	Milk Hauling .....	.04
Depreciation .....	.04	Taxes .....	.04

A number of minor costs, totalling \$0.14, which seem to have little variation relative to location, are not considered.

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**Table 1**

The highest cost input component for dairy men is grain. This item is used in large quantities in order to maintain the extremely high production. The Basin has a decided advantage in feed costs. Although few of the ingredients of feed are produced locally, the location of the milkshed in relation to the port area makes high quality feeds available at low costs. Copra from the Pacific, milo from Texas, and peanut meal from south-eastern United States, are blended with local cottonseed meal, rolled barley, rolled oats and beet pulp to supply a rich, low cost, mixed feed.

<sup>2</sup> Milk Producers' Council, *Cost of Producing Market Milk in the Los Angeles Metropolitan Milkshed*, Frazer and Torbet, Los Angeles, 1959.

Since nearly all feed mills are located close to the port, additional transportation costs are charged for delivery of feed to outlying areas. These added costs range from \$.50 per ton at Chino to \$3.00 south of Hemet. This is one clear advantage for the dairies of the Basin area. It can only be offset by dairymen in outlying areas mixing their own feeds and placing more emphasis on locally-produced materials such as barley, beet pulp, or cottonseed meal. Possibly through the greater use of green feeds, more readily available in the outlying areas, this seeming disadvantage may be partially eliminated.

Since hay is a bulky commodity and it is the second highest cost factor in milk production, its acquisition at the lowest possible price is essential to competitive operation. It is only the intense competition and the large market that makes the Basin producers, who are totally divorced from their hay source, able to continue operation. Agriculturists are rarely in a position to take advantage of a truly competitive market. Farmers in most areas tend to be self-sufficient in hay and feed grains. On the other hand, farmers here are in a generally superior position, with excellent credit and an exact knowledge of what their hay requirements will be. Consequently they are seldom placed in a disadvantageous buying position. Furthermore the sources of supply of hay are stable. All hay is irrigated, so drought risks are eliminated. Where it is produced in surrounding desert areas inopportune rainfall rarely adversely affects the harvest. Only occasionally does wind cause extensive damage to the crop of alfalfa, mostly in the Imperial and Antelope Valleys. Specialized carriers move the hay to market and are sufficiently numerous that, even in the short run, there is little or no variation in transportation rates. Supply and demand of hay are usually in excellent balance. The only important outside factor causing price fluctuation is the cyclic increase in beef herds or the increased demand when drought affects the open range.

The existence of a stable market, however, is not limited to the Artesia-Bellflower area. Since the hay producers are located in a semicircle around the entire milkshed, each sector has at least one hay market at which it has the locational advantage.

All hay producers ship to the Basin as this still comprises the major market. Although the Basin does pay a slightly higher price for hay than do the outlying areas, there is a compensation which offsets this apparent disadvantage. The cost of shipping the milk produced from one ton of hay is roughly equivalent to the cost of moving that hay over the same distance. Therefore, the Basin producers, being at the market, neither gain nor lose because of location.

Labor is employed and used in the Basin in a manner resembling that of industry rather than agriculture. A standard division of the work force has been developed in which employment includes milkers, ranch hands, and the owners or managers. The resultant efficiency makes possible the operation of dairies with a higher "cow-to-man ratio" than in areas elsewhere. In 1959 the average was sixty-two cows per man, by 1960 a common figure was ninety, and the target for many efficiently organized farms for 1961 is in excess of one hundred. In most other areas of the U. S. the ratio is commonly about forty. This system is necessary because milkers' wages in the Basin are about \$550 per month, plus fringe benefits and Social Secu-

rity. All milkers are members of unions and skilled, qualified relief milkers are available from union headquarters on as little as one-half hour's notice. Most farmers wholeheartedly subscribe to the present system as it has diminished risks due to absenteeism, increased efficiency, and contributed to the predictability of costs.

In the outlying areas the organization described exists to a lesser degree. Although labor inputs have been decreased in the past decade, they are often higher than are those of the Basin. Furthermore, with the exception of Chino, there are no unions and, consequently, no readily available relief milkers. Until there is a sufficient concentration of herds to supply employment for a number of relief men, these districts will be at a disadvantage in this respect compared to the metropolitan dairies.

Very few of the dairymen of the Basin raise their own herd replacements. Since hay costs are too high and land too dear to be used in feeding young stock, fresh cows or springers are purchased from local dealers. Although initially this seems to be an expensive system it has a number of advantages not immediately apparent. The heavy feeding program necessary to maintain high milk production limits the producing life of cattle. Most farmers have a turnover of about 40% of the herd per year, and for tax purposes cows are amortized over a short period. This method allows a much greater degree of flexibility than would be possible were replacements produced on the farm. Each farm has "shipping rights" for a given amount of milk, and surplus milk over this amount must be sold at a price far lower than that paid for Grade A. By purchasing cattle the producer can balance very accurately the supply with the demand, and with the contract he has with his processor. Although this system is necessary within the Basin, it does increase the cost of cows.

Dairymen in outlying areas can, with their larger land holdings, supply their own herd replacements rather than incurring purchase and freight charges from Utah, Northern California or Idaho. However, as land costs rise in the outlying area, the Basin system occurs more often and Chino-Ontario now commonly follows that method.

Taxes are also subject to area differentiation and are a cost factor in dairy operation. Although land values in this part of the Basin are on the order of \$15,000 or more per acre, specialized zoning of dairy cities has restricted assessed value to about one-third of this amount. By means of zoning, residential tracts have been precluded, and at present these zoned cities have a heavier cattle than human population. One of these areas, Dairy Valley, has 8.7 square miles, 3,505 people, and 85,000 cows. Cypress occupies 5.5 square miles, has 1,723 people, and 13,500 cows. Dairyland occupies 2.5 square miles, has 620 persons and 11,000 cows. However, since the re-zoning of 400 acres in Cypress for residential use in 1960, estimates are that the city will gain 5,000 persons per year for the next five years.<sup>3</sup>

In addition to the real estate tax, property taxes are assessed on cattle and equipment. Since taxes are proportionate to costs of local government, increases in residential occupancy, without corresponding growth of commerce or industry, would have the effect of placing a disproportionate

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<sup>3</sup> *Los Angeles Times*, Oct. 23, 1960, Sec. J, p. 18.

burden upon Basin dairymen. Those outlying areas which are still rural in nature, therefore, do have a slight tax advantage as a result of lower local government costs.

In addition to the traditional cost items, there are a number of other factors which differ with area. Dry lot dairying in no way resembles that rural occupation elsewhere. Beautiful cattle do not wander along tinkling brooks in sylvan glades and bosky dells. Rather, they stand, rain or shine, cheek by jowl, in multiple corrals each containing 30-60 cows, and they generate flies and odors. Flies become more difficult to control as the use of DDT tends to result in chemical residuals, which are not permissible by law, appearing in the milk. Odors *may be* controllable, but no satisfactory method has yet been found for controlling odors emanating from cattle held in close or cramped quarters.

Under these conditions large-scale residential and cattle populations are not compatible. Nuisance suits have already been instituted in some places and sentiment in general is strongly against those who farm in the city. Many city farmers are constantly made to feel as if they are pariahs in their own communities. This is not the type of relationship that prosperous dairymen wish to have with their fellow citizens and it is not the kind of acceptance they receive in rural areas of the outlying districts.

The key to contraction or expansion of individual dairy herds is the relationship between the farmer and the processor. Each farmer sells his milk to a given processor in accordance with a contract. This contract guarantees the farmer a market for his milk within the range of the contract stipulation. The amount of milk the dairyman may ship to the processing company comprises his "shipping rights."

The shipping rights system is necessary for two reasons: first, milk is such a non-storable commodity and is produced in such great volume that, had he no guaranteed market for Grade A milk, the farmer would be completely at the mercy of the processors; and, second, fixed costs of operation in the Los Angeles milkshed are high enough that the farmer would be quickly bankrupted were he to produce factory or Grade B milk for cheese, butter, or canned milk manufacture.

Most commonly there is a 10% surplus of fluid milk available in the Basin and surrounding areas, thus any individual farmer is essentially expendable as far as the processors are concerned. If in any way the farmer fails to meet the requirements of his contract, his shipping rights may be cancelled on 30 to 60 days notice. It is virtually impossible for a disenfranchised dairyman to negotiate a new contract within this period of time. Therefore, with no market for his milk and faced with continuing high fixed costs, the farmer who has lost his shipping rights must liquidate his holdings immediately.

This life and death power which the processor holds over the farmer can control the location of the dairy industry. The most common cause given for contract cancellation is high bacteria count or chemical residual in milk. Since both these factors are generally more difficult to control where there are a large number of cattle per square mile, the areas outside the Basin are more attractive than those within it.

Finally, the shipping rights are among the most valuable assets of the dairy man. They may not be *legally* bought and sold, but their value is so

high that in some cases they may become the object of some form of exchange and rights may be granted to a new shipper who has recently purchased land outside the Basin at high prices. Reportedly, some processors do own land within the Los Angeles milkshed, and the prices of such land could essentially include shipping rights.

#### SUMMARY

The previous discussion would imply that the dairymen of the Basin and the outlying areas are in an approximately equal economic position. Despite the encirclement of the present Basin area by residential and commercial establishments, its prosperity has never waned. Dairying is still as profitable within the Basin as it is outside. However, its future is not assured. At present, zoning laws have given it temporary security in places such as Artesia, Dairy Valley and Cypress. As land values increase, the farmers' resolve to remain, which was once strong, tends to diminish. Dairyland is considering re-zoning which will permit the development of a part of the area as a commercial and industrial district. Although this may be more compatible as a land use system with dairying than is residential use, it does introduce another element. As these industrial groups move into the dairy area, they increase the pressure which can be applied toward the easing of residential and other restrictions. As a consequence they can exert additional influence on dairies.

The dairymen are able to withstand only so much pressure. They may be able to legally occupy the areas which they now hold, but the point will come here, as it did earlier near the metropolitan centers, in which the game is not worth the candle. The liquidation of holdings is simplified by high value of the land for other purposes, and since the \$15,000 or more per acre may not be excessive for industry, it is beyond the economic rent limitations for agriculture. Since dairymen generally consider themselves to be farmers as well as business men, and since the sale of their present holdings will finance the re-establishment of their operations elsewhere and still leave a profit, these Basin producers may elect to move.

The present indication is that a continued shift will be to Chino-Ontario, the area which is nearest to the present center and still outside of the urbanized zone. This movement is already well under way, and that section is rapidly acquiring the advantages of specialization without the disadvantage of over-concentration.

As presently constituted the dairy industry of California is, within limits, a footloose industry. It is not now tied to soil types, rainfall, growing season or even, importantly, temperature. The cows stand on a slab of concrete, and to them are brought varieties of food and from them are taken huge quantities of milk. It appears that the inexorable laws of psychological and comparative advantage will, within the next few years, relocate that slab. To a limited degree, dairying should pre-empt land in accordance with Von Thunen's principle. Due to the elongated shape of the Southern California megalopolis, a number of specialized nodes are appearing. However, the advantages of specialization are now so evident, the location so favorable, and the head start so imposing, that the Chino-Ontario district is on the way to becoming the dominant dairy area of Southern California.