

**A BIBLIOGRAPHY OF  
DAIRYING IN CALIFORNIA  
1770 – 1945**

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## INTRODUCTION

This bibliography represents a brief reconnaissance into the extensive literature bearing on the history of California dairying from the days of Spanish colonization to the end of World War II. The result of two weeks of work undertaken at the request of the California Dairy Museum and Educational Foundation, it is by no means complete, much less exhaustive. It, nonetheless, identifies the principal sources on the subject and, comprehending a wide range of references, both primary and secondary, suggests the wealth of material that awaits the historian of dairying in the Golden State.

The starting point for my research was the excellent bibliography compiled a quarter of a century ago by Richard J. Orsi, *A List of References for the History of Agriculture in California* (Davis, Calif., 1974), supplemented by the relatively recent publication of Mary Davis, Morton Rothstein, and Jean Stratford, *The History of California Agriculture: An Updated Bibliography* (Davis, Calif., 1991). Subsequent work was done online, using a variety of electronic databases to search for potentially relevant citations, followed, in turn, by research in the libraries of the University of California at Santa Cruz and at Berkeley, especially the Bancroft Library. Unfortunately, limitations of time precluded a systematic review of the bulletins and circulars published by the California Department of Agriculture and the California Agricultural Experiment Station, though representative examples of these highly important serials are included in the bibliography. Nor did I have time to examine the many county histories published in the late nineteenth and early twentieth century, which would have also yielded much valuable material relating to dairying.

Believing that an annotated bibliography is far more useful than a simple list of references, this work is, with relatively few exceptions, limited to sources I was able to actually examine. The annotations are intended not only to indicate the nature of the material and its importance to the scholar but also, in many cases, to provide some insight into the rich history of dairying in California. For convenience, the bibliography is divided into seven sections: Books and Pamphlets, Articles, Newspapers and Periodicals, Government Publications (divided, in turn, into United States, California, and San Francisco), Dissertations and Theses, and Oral Histories.

Although dairying has long been the leading sector of California agriculture, which is itself the most economically important element of the state's economy—the eighth largest in the world—it has largely been neglected by historians. It is hoped that this bibliography will awaken interest in the subject and serve to stimulate further research into an important and complex story that had its beginnings more than two centuries ago.

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## BOOKS AND PAMPHLETS

Abbot, Sue. *North Bay Dairylands: Reading a California Landscape*. Berkeley: Penstemon Press, 1989.

Archibald, Robert. *The Economic Aspects of the California Missions*. Washington, D.C.: Academy of American Franciscan History, 1978.

Archibald's study, based on extensive use of primary documents, has scattered dairy-related references and observes that "cow milk was an important source of food" at the missions.

Atchison, Topeka & Santa Fe Railway System. Colonization Department. *Dairying in the San Joaquin Valley*. [Chicago]: The Department, [1913?].

Bancroft, Hubert Howe. *California Pastoral, 1769-1848*. San Francisco: The History Co., 1888.

Although little butter or cheese was made at the ranchos, according to Bancroft, milk usually figured in the daily meals of both the upper and lower classes. Bancroft's sources relate that milking usually required the united efforts of three persons, and given the general absence of milk pails, all sorts of containers, including crockery, bowls, and even teacups, were pressed into service.

Bryant, Edwin. *What I Saw in California*. New York: D. Appleton & Co., 1848.

Bryant's classic account of California in 1846 and 1847 has scattered references to the availability of cheese, butter, and milk at both the coastal ranchos of the *Californios* and interior ranches of foreign immigrants.

*Catalogue of the Baden Farm Herd of Pure-Bred Short-Horn Cattle, Belonging to Robert Ashburner, Baden Farm, Baden Station, San Mateo County, California*. San Francisco: W. B. Bancroft & Co., 1886.

Includes parts of two lectures delivered by Ashburner in 1876 and 1877 to the California Dairymen's Association, which deal with choosing and breeding dairy cattle, managing a dairy, and related topics.

Cleland, Robert Glass. *The Cattle on a Thousand Hills: Southern California, 1859-1870*. San Marino, Calif.: Huntington Library, 1941.

Includes a brief description of Bernardo Yorba's Rancho Cañada de Santa Ana, which in 1850 employed "one butter and cheeseman who directed every day the milking of from fifty to sixty cows."

Cleland, Robert Glass, and Osgood Hardy. *March of Industry*. Los Angeles: Powell Publishing Co., 1929.

A useful, if dated, survey, with scattered references to the rise of dairying and a series of appendices that show value of products by industry for specific years from 1899 to 1925. In the latter year, “Butter, Cheese, Milk—Evaporated and Condensed” ranked eleventh in value, just behind Motion Pictures.

Cronise, Titus F. *The Natural Wealth of California*. San Francisco: H. H. Bancroft & Co., 1868.

Cronise’s magisterial conspectus has much good information on dairying, particularly the production of butter, which in 1867 amounted to 6 million pounds and was not only sold locally but exported as far as China. At the time of publication there were reportedly 1,200 dairies in the state.

Dana, Juan Francisco. *The Blond Ranchero: Memories of Juan Francisco Dana as Told to Rocky Dana and Marie Harrington*. Los Angeles: Dawson’s Book Shop, 1960.

Contains a few scattered references to dairying at Rancho Nipomo by Dana, who was born when California was under Mexican rule and remembered a “milk room” at the *casa*, where cheese was made in vats and butter in “shallow, wooden tubs.”

Farquhar, Francis P., ed. *Up and Down California in 1860-1864: The Journal of William H. Brewer, Professor of Agriculture in the Sheffield Scientific School from 1864 to 1903*. New Haven: Yale University Press, 1930.

Provides a brief description of a primitive, isolated dairy farm east of present-day San Leandro, visited by Brewer in late 1862, where some eighty cows were kept for milk and where butter and cheese were made in the summer.

Forbes, Alexander. *California: A History of Upper and Lower California*. London: Smith, Elder & Co., 1839.

Forbes’ book, the first in English relating exclusively to California, contains a richly detailed account of agriculture in the Mexican province, including much information on the Hispanic approach to dairying. According to Forbes, who relied on the accounts of travelers for his information, what little butter and cheese was produced in California was “of the very worst description.” In contrast to these “execrable compounds” was the “excellent” butter and cheese made at the Russian settlement at Bodega Bay.

Gates, Paul W., ed. *California Rancho and Farms, 1846-1862: Including the Letters of John Quincy Adams Warren of 1861, Being Largely Devoted to Livestock, Wheat Farming, Fruit Raising, and the Wine Industry*. Madison, Wis.: State Historical Society of Wisconsin, 1967.

Gates' lengthy introduction includes an excellent, if brief, survey of the rise of the California dairy industry during the age of gold, when, in response to enormous immigration, the number of milk cows increased from 104,339 in 1852 to 273,120 in 1859. Warren was the publisher of the *California Farmer*, and one of his letters comprises a lengthy, detailed description of the dairy farms of Marin County.

Hampson, R. Paul, Roberta S. Greenwood, and Mark T. Swanson. *The Billingsley Dairy: A Family Enterprise in the Prado Basin*. Prepared for the U.S. Army Corps of Engineers, Los Angeles District. Pacific Palisades, Calif.: Greenwood and Associates; Sonora, Calif.: Infotec Research Inc., 1990.

Herbert, Rand. *A History of the California Creamery Operators' Association*. N.p., 1984.

*History of Jersey Farm Dairy, San Bruno, Cal.: R. G. Sneath, Proprietor*. San Francisco: George Spaulding & Co., printers, [1880].

Established in 1875 by R. G. Sneath—merchant, farmer, and banker—the Jersey Farm Dairy was “perhaps the largest one of its kind in the United States, or in the world.” Sneath’s pamphlet describes the extensive operations at San Bruno and discusses, among other matters, the superiority of the best “country milk” over milk from city yards, where cows were allegedly often fed distillery or brewery slops. Jersey Farms Dairy maintained a City Depot at 837 Howard Street in San Francisco and characterized it as “a popular resort for hundreds of ailing people daily.”

Hittell, John S. *The Commerce and Industries of the Pacific Coast of North America*. San Francisco: A. L. Bancroft & Co., 1882.

Provides an excellent survey of dairy farming in California, focusing on the operations of R. G. Sneath of San Bruno, Joseph Russ of Ferndale, and the big ranches at Point Reyes. In 1881 Sneath’s Jersey Farm Dairy, which had between 500 and 600 cows, produced 400,000 gallons of milk and was thought by Hittell to be “the largest fresh-milk dairy on the globe.”

Hodges, R. E., and E. J. Wickson. *Farming in California*. San Francisco: Californians Inc., 1923.

Promotional brochure intended to attract farmers to California; contains a short chapter on “Livestock and Dairying” and a list of dairy organization.

Hutchison, Claude B., ed. *California Agriculture*. Berkeley: University of California Press, 1946.

Although published more than a half century ago, *California Agriculture* is still considered the most useful synthesis of the subject. Focusing on the period from the late nineteenth century through the 1930s, it brings together much useful information on the history of dairying, especially educational, scientific, and technological advances. By 1894, according to the authors, the value of dairy products was second in importance only to wheat among agricultural enterprises, and at the end of World War II, dairying held first place both in terms of value produced and distribution, with 50 percent of all California farms keeping cows.

Jelinek, Lawrence J. *Harvest Empire: A History of California Agriculture*. 2d ed. San Francisco: Boyd & Fraser, 1982.

Chiefly useful in understanding the astounding growth and importance of dairying in relation to other California agricultural enterprises.

*Jersey Farm Dairy*, R. G. Sneath, Proprietor. San Francisco: Bacon & Co., printers, [1886].

Expanded and revised edition of the 1880 publication *History of Jersey Farm Dairy*, with new information on the “Dangers of Unclean Milk” and related subjects. In 1885 there were reportedly 149 dairies operating within the city limits of San Francisco.

Jones, Robert E. *Dairying in California*. San Francisco: Californians Inc., 1923.

Promotional brochure extolling the opportunities for dairy farming in the Golden State. Californians Inc. was a nonprofit corporation “interested in the sound development of California.”

----- . *The Beginning of Dairying on the Pacific*. N.p., 1930.

Paper read at the University of California Short Course, University Farm, Davis, 8 February 1930.

McGowan, Joseph A. *History of the Sacramento Valley*. 3 vols. New York: Lewis Publishing Co., 1961.

Contains much scattered information on dairying in the valley.

Norton, George. *Dixon, California: The Dairy City*. San Francisco: Homeseekers' Bureau of Sunset, The Pacific Monthly, for the Dixon Chamber of Commerce, [1914].

Promotional brochure, with information on local dairying and dairy opportunities.

Preston, William L. *Vanishing Landscapes: Land and Life in the Tulare Lake Basin*. Berkeley: University of California Press, 1981.

Traces the emergence of dairying from an integral part of mixed farming into a highly specialized enterprise, as well as the rise of dairy cooperatives and associations, in Tulare and Kings Counties. Between 1900 and 1925 the percentage of farms reporting dairy products declined from 73 percent to 58 percent, while the total value of dairy products rose from less than \$.25 million to more than \$5.25 million.

*The Romance of the Milk Products Industry*. [Los Angeles: America Investment Co., 1927?]

Includes information on the California Cooperative Creamery Company, owned by the California Milk Producers Association.

Scheuring, Ann Foley, ed. *A Guidebook to California Agriculture*. Berkeley: University of California Press, 1983.

Includes a short survey of the "modern history" of the state's dairy industry, from the Gold Rush of 1849 to 1980, by Clement L. Pelissier of the University of California at Davis. By 1940, noted Pelissier, California ranked thirteenth among the states in number of cows but seventh in total milk production.

Smith, Wallace. *Garden of the Sun: A History of the San Joaquin Valley, 1772-1939*. Los Angeles: Lymanhouse, 1939.

Includes a succinct but important overview of the growth of dairying in the San Joaquin Valley. Because of the hot weather, large-scale development awaited the development of the cream separator and pasteurization. The Modesto-based Milk Producers' Association of Central California, organized in 1918, was the first creamery cooperative in the state to produce more than 5 million pounds of butter in a year, and beginning in 1924 it was for many years the largest cooperative factory in the country.

Starkey, Gene. *Rich Heritage of the Cal Poly Dairy Science Program*. San Luis Obispo, Calif.: Dairy Science Department, California Polytechnic State University, 1991.

Swanson, Mark T., and Roger G. Hatheway. *The Dairy Industry of the Prado Basin*. Prepared for the U.S. Army Corps of Engineers, Los Angeles District. Pacific Palisades, Calif.: Greenwood and Associates; Sonora, Calif.: Infotec Research Inc., 1989.

A full examination of the Prado Basin dairy industry (located between the towns of Chino and Corona) from earliest times through the rise of corporate dairying in the 1930s to contemporary operation, within the context of both regional and national developments. An important source for an understanding of dairying in southern California.

Tinley, J. M. *Public Regulation of Milk Marketing in California*. Berkeley: University of California Press, 1938.

A thorough and excellent study of the factors leading up to the Young Act and the Desmond Act of 1937, which empowered the California State Director of Agriculture to set minimum prices to be paid by fluid milk distributors, as well as minimum wholesale and retail prices. The purpose of the laws—enacted in response to the collapse of milk marketing in the Great Depression—was, initially, to stabilize milk marketing and, ultimately, to increase efficiency.

Webb, Edith Buckland. *Indian Life at the Old Missions*. Los Angeles: Warren F. Lewis, 1952.

Chapter 13, “Cattle and Other Live Stock Sent up from Mexico,” has much detail on the establishment of dairying in California, beginning in July 1770 with the arrival at Mission San Diego of a herd of 164 cattle, mostly cows. Following the great famine of 1774 at Monterey, Fray Francisco Palóu wrote, “For eight months milk was the manna for all from the comandante and the Fathers down to the least individual.”

Wickson, E. J. *Rural California*. New York: Macmillan Co., 1923.

Wickson, a professor emeritus of horticulture at the University of California, provides a short history of California dairying that is distinguished by keen insight into the evolution of the industry.

## ARTICLES

Cureton, Gilbert. “The Cattle Trail to California, 1840-1860.” *Historical Society of Southern California Quarterly* 35 (June 1953): 99-109.



Succinct overview of the early stock drives along the immigrant trails to California, which by the Civil War had brought some half million cattle west, among them large numbers of milk cows.

[De Groot, Henry]. "Dairies and Dairying in California." *Overland Monthly*, o.s., 4 (April 1870): 355-60.

Provides much important information on dairying in 1870, which was then chiefly confined to the coastal counties and which was largely devoted to the manufacture of butter and cheese. At the time, the largest dairy farm in the state was said to be that of Shafter & Howard in Marin County, which comprised 66,000 acres, 3,600 milk cows, and twenty separate dairies and was believed to have produced the largest cheese in the world, weighing some two tons.

DuPuis, E. Melanie. "Sub-National State Institutions and the Organization of Agricultural Resource Use: The Case of the Dairy Industry." *Rural Sociology* 58 (Fall 1993): 440-60.

A comparative historical analysis of how the dairy industries of New York, Wisconsin, and California were restructured by state government in response to the agricultural crisis of the Great Depression.

Ma, L. Eve Armentrout. "Chinese in Marin County, 1850-1950: A Century of Growth and Decline." *Chinese America: History and Perspectives* (1990): 25-48.

Makes reference to Chinese working as milkers on Charles Howards dairy ranch at Point Reyes and to Chinese employed as butter makers at various dairies in the county.

Parker, Paul. "Early Dairying in California." *Pacific Rural Press*. 80 (2 July 1910): 1, 14-15.

Contains important details of dairying during the 1850s and early 1860s, including the first planting of alfalfa and the first importation of Ayrshires. According to Parker, the demand for milk in the Gold Rush rapidly increased the importation of good American dairy stock, and in 1849, cows brought overland sold for as much as \$500 each, while native stock went for only \$40 to \$50 a head.

Parks, Fred Warren. "Dairying in California." Part II. *Overland Monthly*, n.s., 11 (May 1891): 449-63.

Focuses on dairies specializing in the production of butter and cheese, with a lengthy description of a dairy several miles north of the town Santa Cruz, which, though unnamed, is clearly Wilder Ranch. For Part I of the series, see under Francis E. Sheldon.

Santos, Robert L. "Dairying in California through 1910." *Southern California Quarterly* 76 (Summer 1994): 175-94.

A recent and useful survey of the rise of dairying in the Golden State. Includes succinct sections on "California Dairy Cattle," "Butter and Cheese," "The Cream Separator," "The Milking Machine," and "Sanitation," among others.

Sheldon, Francis E. "Dairying in California." Part I. *Overland Monthly*, n.s., 17 (April 1891): 337-50.

Contains information on contemporary dairy-cow breeds, cattle feeds, and milking practices. Some of the illustrations are by the famed photographer Carleton E. Watkins. For Part II of the series, see under Fred Warren Parks.

Smith, Ellsworth C. "The Dairying Industry of California." *Overland Monthly*, n.s., 43 (April 1904): 268-78.

Includes a short history of dairying in California, together with much information on the "Dairies and Milk Supply of San Francisco," which at the turn of the century amounted to 34,000 gallons of fresh milk a day. Also addresses sanitary issues and relates the recent attempts of dairymen to supply customers with better and purer milk.

Sneath, R. G. "Dairying in California." *Overland Monthly*, n.s., 11 (April 1888): 387-95.

An excellent source of information on dairy practices and dairy life in the 1880s by one of California's leading dairymen.

Steele, Catherine Baumgarten. "The Steele Brothers: Pioneers in California's Great Dairy Industry." *California Historical Society Quarterly* 20 (September 1941): 259-73.

Story of the Steele brothers—Isaac, George, and Edgar—who in the 1850s immigrated to California, where they began dairying outside Petaluma and, in 1857, established the first dairy at Point Reyes. The brothers, who by 1858 were manufacturing some fifty thousand pounds of cheese a year, subsequently expanded their operations into San Mateo County, purchasing property at Año Nuevo, and to San Luis Obispo County, where they acquired three huge ranchos.

Stern, Norton B. "The Jewish Dairyman of San Francisco." *Western States Jewish Historical Quarterly* 14 (January 1982): 167-74.

Relates the history of the dairy established two miles south of San Francisco, along the San Bruno Road, in the early 1860s by Isaac Stone, who by 1879 had

175 cows and employed four Swiss dairymen. The Stone dairy, which operated under San Francisco Milk Permit No. 1, merged with Borden in the mid-1920s.

Watson, Samuel E. "An Index to California Dairying Conditions." *Overland Monthly*, n.s., 29 (May 1897): 519-21.

Brief review of California dairying regions, which notes that, for the previous thirty years, the chief grazing lands had been along the coast, from a hundred miles north of San Francisco down to Point Conception

## NEWSPAPERS AND PERIODICALS

*California Cultivator*. 1 (1877) – 95 (31 January 1948).

The *California Cultivator* was issued monthly and under various names over the years, reflecting mergers and absorptions. The one year reviewed, 1898, reveals publication of a regular section titled "Dairy and Livestock." The August 1898 issue, a "Special Illustrated Dairy Edition," reports on the annual meeting of the Dairymen's Association of Southern California and has more than a dozen short articles on dairying, including "An Up to Date Creamery" by W. Harvey Smith of Norwalk, and the highly valuable "Pioneer Dairying in Los Angeles County" by George H. Peck. The *California Cultivator* absorbed *Rural Californian* in July 1914 and *Livestock and Dairy Journal* in October 1916, then merged with *Pacific Rural Press* in January 1948 to form *California Farmer*.

*California Dairyman*. 1 (4 February 1922) – 41 (1961).

The journal of the California Milk Producers' Association, *The California Dairyman* was dedicated to advancing the interests of the southern California dairy industry and served as a clearinghouse for informing association members of the "activities, regulations and recommendations of all of the State, City and County Departments and Institutions having to do with Dairy and Livestock matters." Published biweekly, the journal is filled with a wide spectrum of material useful to understanding the history of dairying, including breeding advice, pricing, impending legislation, scientific and technological advances, awards, crop surveys, and local news, as well as a plethora of advertisements.

*California Farmer and Journal of Useful Sciences*. 1 (5 January 1854) – 54 (1889).

The oldest periodical devoted to agriculture published in the state. The first two volumes (all examined) have indexes, with various dairy-related headings, and a review of the pages referenced reveals important material on dairying. The 17 August 1854 issue, for example, includes a report on "Dairy Stock," which declares that a visitor to "our Dairy and Stock Ranches . . . will find that no State

of the Union could boast of a general stock of so fine cattle as California,” and mentions fine Durhams, Ayrshires, Devons, and Holdernesses.

*Dairy and Produce Review*. 1 (1901) –13 (1906).

Continued by *Pacific Dairy Review*.

*Livestock and Dairy Journal*. 1 (1901) – 15 (September 1916).

Absorbed by *California Cultivator* in October 1916. See *California Cultivator*.

*Pacific Dairy Review*. 10 (1906) – 56 (1952).

Continues *Dairy and Produce Review*.

*Pacific Rural Press*. 1 (7 January 1871) – 155 (31 January 1948).

A review of select volumes reveals that some are indexed, others not. Indexed volumes examined have entries under “dairying” and various dairy-related headings. Published weekly from inaugural issue through 7 January 1939, biweekly thereafter. Merged with *California Cultivator* in January 1948 to form *California Farmer*, which is still published today.

*Rural Californian*. 1 (November 1882) – 38 (June 1914).

Absorbed by *California Cultivator* in July 1914. See *California Cultivator*.

#### **GOVERNMENT PUBLICATIONS UNITED STATES**

U.S. Department of Agriculture. Bureau of Animal Industry. *Dairying in California*. By Edward J. Wickson. Bulletin No. 14. Washington, D.C.: Department of Agriculture, Bureau of Animal Industry, 1896.

U.S. Department of the Interior. National Park Service. *A Good Life: Dairy Farming in the Olema Valley*. By D. S. (Dewey) Livingstone. San Francisco: National Park Service, 1995.

A historic resources study of dairy ranching in the lands adjoining the Point Reyes peninsula. More than a score of dairy and beef ranches are discussed in this heavily illustrated volume, which makes evident the region’s contribution to the development of dairying in California.

U.S. Department of the Interior. National Park Service. *Ranching on the Point Reyes Peninsula: A History of the Dairy and Beef Ranches within Point Reyes National Seashore, 1834-1992*. By D. S. (Dewey) Livingstone. Rev. ed. Point Reyes Station, Calif.: Point Reyes National Seashore, National Park Service, 1994.

A thoroughly researched historic resources study of the dairy ranches at Point Reyes, providing a wealth of detail on the foundation of the state's dairy industry.

U.S. Department of the Interior. National Park Service. *"There Is No More Extensive Dairy in the Township": The History and Architecture of Upper Pierce Point Ranch, 1856-1985*. By Richard A. Borjes and Gordon Chappell. San Francisco: National Park Service, 1986.

Contains a detailed architectural description of the ranch's many structures and a history of the ranch itself, established in the late 1850s on the Point Reyes Peninsula.

#### **GOVERNMENT PUBLICATIONS CALIFORNIA**

California Department of Agriculture. *The Story of California's Milk Stabilization Laws*. By William J. Kuhrt. Bulletin No. 54. Sacramento: California Department of Agriculture, 1965.

California Department of Agriculture. California Crop and Livestock Reporting Service. *California Livestock and Poultry: A Statistical Summary*. By George A. Scott and Herman A. Swedlund. Special Publication No. 192. Issued in cooperation with the U.S. Department of Agriculture. Sacramento: n.p., 1943.

Provides a useful overview of the history of the California cattle industry, particularly the first half of the twentieth century, together with much statistical information on dairying, such as annual milk production, dairy cows shipped into California annually by state, and comparison of California manufactured dairy products with that of the United States as a whole.

California Department of Agriculture. Division of Animal Industry. *California Dairy Products (1919-1920)*. By C. F. Hart and H. G. Asseltine. Circular No. 3. Sacramento: California State Printing Office, 1921.

Issued as a supplement to the Annual Report of the California Department of Agriculture for 1919-1920, the circular is a comprehensive descriptive and statistical report on California dairy products. An appendix lists, by county, the state's creameries, cheese factories, sweet cream depots and pasteurized milk plants, condensaries, and ice cream manufacturers. The approximate value of all dairy products for the year was \$99 million, and as illustrated with a line drawing,

the volume of total butter produced—68,126,560 pounds—was twice that of the 310-foot UC Berkeley campanile. Continued by the Division of Animal Industry's *Statistical Report*.

California Department of Agriculture. Division of Animal Industry. *Provisions of the Agricultural Code Relating to Animal Industry*. Sacramento: California State Printing Office, 1933.

A compendium of the newly established Agricultural Code, approved by the governor of California on 7 February 1933, which consolidated and revised existing statutes. Division IV covers "Dairies and Dairy Products."

California Department of Agriculture. Division of Animal Industry. *Statistical Report of California Dairy Products, 1920-1921*. By J. J. Frey. Special Publication No. 21. Sacramento: n.p., 1922.

A continuation of the series initiated by the Division's publication *California Dairy Products (1919-1920)*, the *Statistical Reports* were issued, variously, annually and biannually until World War II, with publication resuming in peacetime. They contain vital information on the growth and significance of the industry. Title varies.

California Development Board. *Dairying in California*. By A. J. Sturtevant Jr. Bulletin No. 3. N.p., 1914.

California State Agricultural Society. *Transactions of the California State Agricultural Society during the Year 1858*. Sacramento: John O'Meara, 1859.

Created by act of legislature in 1854, the California State Agricultural Society began publication of the *Transactions* four years later. The first of the series contains an exhaustive report on California farms by the society's Visiting Committee, which provides information on dairying in the state. Though usually published annually, the *Transactions* occasionally appeared biannually, and for a handful of years no reports were issued. Title varies; continued in 1911 by the California State Board of Agriculture *Reports*.

California State Board of Agriculture. *Report of the California State Board of Agriculture for the Year 1911*. Sacramento: Friend Wm. Richardson, 1912.

Issued annually beginning in 1911, the *Reports* continued the series of *Transactions* published under the authorship of the California State Agricultural Society. The *Reports* contain wide-ranging and invaluable statistical tables relating to dairying, providing information on such subjects as "Cows and Cattle by Counties," "Butter and Cheese by Counties, and "Annual Value of Dairy Products," with many of the figures going back as far as 1850. Title varies; last *Report* published was for the year 1921.

California State Board of Health. *The Production of Pure Milk*. 2d ed. [Sacramento]: California State Printing Office, 1917.

Rules for the enforcement of the provisions for tuberculin testing, Chapter 576, California Statutes of 1917.

California State Dairy Bureau. *First Report of the State Dairy Bureau to the Governor of the State of California, from May 1, 1895, to October 1, 1896*. Sacramento: A. J. Johnston, 1896.

Established in the spring of 1895, the State Dairy Bureau was charged with enforcing the provisions of recently enacted legislation to prevent deception in the manufacture and sale of butter and cheese. *First Report* includes a description of the bureau's operations, as well as a list of more than two hundred California creameries and cheese factories. Subsequent *Reports*, which were published through the year 1918, contain much useful information on the dairy industry and on government regulatory concerns and activities.

California State Library, comp. *Laws of California Relative to Production and Standard of Dairy Products*. [Sacramento]: State Printing Office, 1915.

University of California. College of Agriculture. Agricultural Experiment Station. *California State Dairy Cow Competition, 1920-22*. By F. W. Woll. Bulletin No. 351. Berkeley: University of California Press, 1922.

Includes much statistical information on production of milk in relation to breeds, as well as statements on feeding and handling methods by prize-winning owners.

University of California. College of Agriculture. Agricultural Experiment Station. *Cow-Testing Associations in California*. By Edwin C. Voorhies. Bulletin No. 314. Berkeley: University of California Press, 1919.

Focuses on the importance of weighing and testing the milk of each cow at monthly intervals, particularly in relation to providing information for breeding purposes. At the time, there were fifteen cow-testing associations scattered through California.

University of California. College of Agriculture. Agricultural Experiment Station. *Dairy Management in California*. By Arthur Shultis. Bulletin No. 640. Berkeley: University of California, 1940.

Valuable study of the industry on the eve of America's entry into World War II, with sections on California dairy districts and the various economic factors of dairying.

University of California. College of Agriculture. Agricultural Experiment Station. *Dairy Products*. By Edwin C. Voorhies. Bulletin No. 514. Berkeley: University of California Printing Office, 1931.

Despite the title, *Dairy Products* is, in fact, a full, book-length study of great importance to understanding the history of the California dairy industry, especially in relation to dairying in the United States as a whole. Includes sections on dairy breeds, dairy feed conditions, production, consumption, foreign trade, and importance of the industry, among others, together with a brief, useful overview of the history of dairying in the Golden State.

University of California. College of Agriculture. Agricultural Experiment Station. *An Economic Survey of the Los Angeles Milk Market*. By Leland Spencer. Bulletin No. 513. Berkeley: University of California Printing Office, 1931.

Provides a highly detailed picture of dairying in Los Angeles in the year 1930, including information on production by individual dairies, monthly supply, consumption, utilization of surplus milk, transportation, prices and margins, dairymen's organizations, and cooperative associations.

University of California. College of Agriculture. Agricultural Experiment Station. *Feeding and Management of Dairy Calves in California*. By S. W. Mead. Bulletin No. 478. Berkeley: University of California Printing Office, 1929.

University of California. College of Agriculture. Agricultural Experiment Station. *Feeding Dairy Cows in California*. By F. W. Woll. Circular No. 215. [Berkeley: University of California Press], 1919.

Advice on improving milk production through improved feeding, with examples of daily diets.

University of California. College of Agriculture. Agricultural Experiment Station. *Investigations with Milking Machines*. By F. W. Woll. Bulletin No. 311. Berkeley: University of California Press, 1919.

Reports on a four-year study to ascertain "the effect of long periods of machine milking on the dairy production of cows." At the time, the transition from hand milking was proceeding slowly, due, in part, to the concerns of many dairymen that machines reduced the production of cows.

University of California. College of Agriculture. Agricultural Experiment Station. *Trials with California Silage Crops for Dairy Cows*. By F. W. Woll and E. C. Voorhies. Bulletin No. 282. Berkeley: University of California Press, 1917.



Results of a four-year series of experiments on siloing and feeding various crops—Indian corn, milo, feterita, and alfalfa, among others—with a view to determining their value to the dairy and stock farmer.

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