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Dairying and Changing Patterns of Family Labor in Rural New Mexico

JOAN M. JENSEN

In 1998, New Mexico ranked eleventh in milk production in the country, up from thirty-sixth in 1981. Milk and dairy products generated $654 million in cash receipts, among agricultural products second only to those from beef. The state had 217,000 dairy cows. Twenty-eight years before, in 1970, the number had been just over thirty thousand. From 1970 to 1998, milk production climbed from 304 million pounds to 4.4 billion pounds per year. On average, each cow now produced 20,065 pounds of milk per year, up from 9,500. Experts ranked New Mexico cows the fourth highest producers in the United States, and New Mexico led all states for the number of cows per herd, with an average dairy milking 1,286 cows. Chaves and Doña Ana counties led in total milk production, followed by Roosevelt and Curry counties. Almost 70 percent of the milk was made into cheese.¹

This statistical roll call presented in 1999 by the New Mexico Department of Agriculture and the New Mexico National Agricultural Statistics Service clearly documented the importance of dairying in New Mexico. Yet its history remains all but invisible, overshadowed by the history of ranching. This article first explores changes in patterns of family labor on dairies in New Mexico, then analyzes how these changes compare with those going on in the rest of the country.

The usual practice of historians has been to divide the development of dairying elsewhere neatly into four stages: subsistence production of butter and cheese for home use with women doing most of the processing; market surplus production for local and regional consumers

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with women increasing the amount of processing; marketing milk to small cheese factories or creameries with men taking over much of the processing; and finally, the development of a full-fledged industry dominated by non-farm labor and management, with a panoply of state regulations, trade associations, and complex marketing agreements. This article suggests that similar development took place in New Mexico, but with some significant differences. Dairying grew from small herds of goats and kitchen-based cheese processing by Native American and Hispanic women to a highly commodified and mechanized industry dominated by Anglo and Hispanic men. Yet the stages are not nearly so tidy in New Mexico, and the development of dairying is much more complex when one looks carefully at the role of family labor. Both age and gender shaped how tasks were integrated into the family dairy.2

**GOATS AND ASADERO**

Spaniards brought the first goats to New Mexico in the seventeenth century and taught Native women how to make cheese. For several centuries, families on small farms raised goats for subsistence production of cheese and local trade. Children often herded goats, and women usually milked the goats and made cheese. We know little of the early cheese-making techniques, but a number of accounts document family cheese making and local trade in the late nineteenth century.

One of the most interesting accounts comes from María Montoya Martínez, the famous Pueblo potter of San Ildefonso. In the 1940s, anthropologist Alice Marriott asked Martínez what kind of work she did in childhood. Martínez recalled that when only five years old, in the 1880s, she sold cheese that her mother had made. Every Tuesday morning, her mother took the clabbered milk that had set overnight, worked the liquid out of it, pressed it into wooden bowls, then removed the firm white cheeses, and wrapped them in clean cloths. The small tot took three big and six small cheeses in a basket to the nearby village where she traded them or received cash—a dime for the small cheeses, a quarter for the large.3

Hispanic women made a similar cheese they called asadero. In the late nineteenth century, they made asadero regularly and also traded it to neighbors. Just south of Santa Fe, at Las Golondrinas, the living farm
museum that preserves aspects of nineteenth-century rural culture, one can still sample this tasty goat cheese. While it is no longer made as Hispanic farm women made it, one can understand why goat cheese was such an important item of trade for nineteenth-century New Mexicans. Long into the twentieth century, most New Mexicans had little need for cow's milk or cheese because they had goat's milk and cheese. Hilaria Evaro, who moved from Texas to New Mexico in the 1930s, made asadero from goat's milk. In a 1978 interview, Evaro told how she milked the goats every morning and made cheese, largely for home consumption since they had a large family. Other Hispanic women sold small quantities of goat cheese locally.4

**Buttermaking Comes to New Mexico**

The making of goat cheese never developed into an industry in New Mexico. Instead, as the Anglo population increased in the late nineteenth century, immigrants brought with them a cow-based economy that already had developed in the eastern states. This dairying economy, which emphasized butter as its primary dairy product, soon provided the Anglo settlers with butter to use in cooking.

Hispanic women usually did not use butter for cooking. They used lard. Stella Hatch, who arrived near Sand Hills, New Mexico, in the early twentieth century, illustrated the difference between Anglo and Hispanic traditions when she recounted her first experience trying to sell butter. She took a batch of butter to a nearby store, expecting to obtain credit to buy commodities not produced on her farm. Dairying had always provided a stable income for farms that could market surplus butter, and farm women often supplemented income from cash crops by adding dairying to their regular farm work. To Hatch's surprise, the Sand Hills storekeeper told her they had no market for butter. "I was shocked," she said, "I had never heard of anyone not wanting to buy butter." Fortunately, the storekeeper said he could use lard, and since Hatch had just rendered some lard, she returned with it to get the needed credit. Lucille Tatreault of Mesilla Valley, who sold butter to her Anglo neighbors, also remembered selling lard to Hispanic neighbors.5

In order to understand the butter-making practices that Anglos transferred to New Mexico in the late nineteenth century, a brief summary of the relationship of dairying to family labor elsewhere in the
United States is necessary. In the early nineteenth century, women had made both cheese and butter at home on farms. As the population of the eastern states expanded, the demand for cheese caused a production shift from farm to factory. The effect of this shift on family labor is most clearly seen in New York State where commercial cheese making developed after 1830. At first, women worked in the new cheese factories. Between 1875 and 1900, however, the female workforce in cheese factories dropped from 50 to 12 percent. Men, meanwhile, increased their role in farm dairies. Women concentrated on other types of farm production, such as raising and selling poultry and eggs. Or they moved into off-farm occupations, such as factory work or teaching. By the early twentieth century, the new male-dominated commercial cheese-making industry had spread westward to other states, including Wisconsin, which by 1910 had surpassed New York in cheese production. Together, Wisconsin and New York produced almost 80 percent of all cheese in the United States. Few of the farm women who arrived in New Mexico at the turn of the century from other regions brought skills in making cheese, for cheese was no longer made on farms. Like Stella Hatch, however, they did bring considerable skill in making butter.

Even without cheese making, U.S. farms remained very much involved in dairying; however, the sexual division of labor changed significantly. A 1920 study by the United States Department of Agriculture (USDA) found that fewer than 45 percent of farm women still milked cows. Men had taken over milking at different times in different regions, a complex transition in gender work that moved much of women’s work from barnyard to farmhouse, but women remained intimately involved in dairying. Ninety-three percent washed milk pails and 75 percent separated milk, and over half the women still made butter. Large numbers of women would continue to perform these tasks on New Mexico farms.

Developments in technology and agricultural and labor theory would ensure the farm family’s continued role in dairying. Agricultural economic theory supported the continued involvement of farm family labor in dairying. The theory of diversified farming dominated late-nineteenth- and early-twentieth-century farming advice. As late as the 1930s, USDA economists were still urging some farm families to diversify and add dairying. These experts recommended that family farms had the best chance to survive climate and market fluctuations by including in their production schedules at least two to four products for
sale. Of these products, one should be animals as opposed to field crops, and one should result in cash income rather than credit or exchange for other products. Dairying was an excellent way to diversify. Dairy production demanded relatively small amounts of capital investment, depended on family labor, and had a fairly consistent market value because of sustained demand. Dairying was widespread because it provided economic stability for these diversified family farms. As late as the 1940s, experts expected farm family labor could handle no more than ten to fifteen cows without hiring extra labor or increasing investments in barns, fencing, or other equipment. Orval Goodsell of the USDA Bureau of Agricultural Economics advised that dairies of this size “merely entail more efficient use of family labor.”

A labor theory based on intensification of family work formed the basis of this economic approach. Popular instruction books for dairying produced during the first decades of the twentieth century emphasized the importance of family labor. A 1917 textbook on Productive Dairying, by R. M. Washburn, was particularly emphatic about the benefits of child labor. “The diversified livestock farm offers the best place in the world for the proper, profitable, employment of children,” he wrote. Children could thus be wage earners in their own homes, and since labor was provided by “the growing family who must be maintained in any case,” mornings, evenings, Sundays, and holidays could be “employed productively.” The family was now providing labor once done by a hired man who, according to Washburn, was becoming “increasingly unpleasant” to keep. “Their [hired male] labor is desired, their society is not,” Washburn concluded. Another textbook, published in 1918, simply noted that on small farms where hired men could not be employed full time, diversification would allow greater use of the labor of farm women, since women could help with milking. “Women can milk and do housework between milkings,” this expert suggested.

Women did considerably more than milking in this labor-intensive system. Experts emphasized that all dairy equipment had to be kept spotlessly clean, a task simply assumed to fall to women as part of their household tasks. Even if they did not milk, almost all farm women washed and sterilized milk pails. They also strained the milk and washed and boiled strainer cloths after each milking. As late as 1920, an estimated three-quarters of all farm women separated cream, then disassembled and scoured the many parts of the hand cream separator each time it was used.
Changes in the technology of cream separation had much to do with the intensification of women's farm labor. About 1875, some farms began to skim milk and take the resulting cream to local creameries for processing into butter. The quantities were small at first because gravity separation—waiting a day or so for the lighter cream to rise to the top of shallow pans—was the only way to separate cream from milk. The invention in 1876, by Dr. Gustaf de Laval, of a large centrifugal cream separator opened the prospect of mass-produced creamery butter. By 1880, the De Laval Company was manufacturing and distributing cream separators that could rapidly process large quantities of milk. The machines used centrifugal force to separate the cream that could be powered by small steam engines. One skilled butter maker and one laborer could operate a creamery serving dozens of farms and nearby urban areas. These centralized creameries became dominant in commercial butter-making at the same time that specialization in dairying was taking place. Farm families took milk to the creameries where they were paid according to quantity of milk and its butterfat content. From 1899 to 1909, butter production on farms declined as the amount produced in creameries increased.

It took a few years for farmers to discover that this new industrialized butter-making system was not working well. When farmers brought whole milk to the creamery, they received skimmed milk to take home to feed their animals. However, farmers felt the creamery skim milk was not fit for raising calves and other animals, especially pigs. In addition, they believed that the lack of pasteurization and disease control led to the spread of tuberculosis. Consequently, farm families wanted to separate their own cream so that they could control the quality of the skim milk.

The De Laval Company introduced the hand separator in 1887, a small machine that could be used on the farm. This “Baby” cream separator slowed the trend toward creamery separation (Fig. 1). These separators were composed of a complex arrangement of bowls and spouts that allowed the operator to feed whole milk into a spinning bowl which then threw the milk against the wall of the separator in such a way that the heavier liquid was thrown outward with greater force than the lighter liquid. When the bowl overflowed, the skim milk escaped from an opening in the wall near the top while the cream escaped from an opening near the center of the bowl. This much smaller, hand-powered cream separator was marketed at a price affordable to large numbers of
Figure 1. Engraving of the “Baby” No. 1 De Laval Cream Separator, 1894. From a trade publication, *Farm and Dairy. The De Laval “Baby” Cream Separators. A Practical “Education” in the Varied Advantages of Centrifugal Separation. What Users Have to Say* (1894). Amador Collection, Rio Grande Historical Collections, New Mexico State University Library, Las Cruces, Ms. 4 ATC, box 27, folder 19.15
farm families. It produced better skim milk for feeding purposes and reduced hauling expenses because farmers only had to transport cream to the factories, which they could do less frequently than with whole milk.  

The new home separators not only delayed the transfer of butter making to creameries, but also greatly increased the size of home dairies, leading to an intensification of family labor. Two-thirds of all butter was still made on farms in 1900, and women continued to produce most of it. Although by 1920 the fraction had dropped to two-fifths, the amount being produced was still substantial. Farm women continued to process an immense amount of butter in addition to all their other tasks.

Women brought their butter-making skills to New Mexico. Small dairy enterprises dotted New Mexico by the end of the first decade of the twentieth century. Proceeds of these butter-making projects, the majority still organized by ranch and farm women, formed a small but important source of cash income. Because prices for dairy products were relatively stable—butter usually sold for about thirty cents a pound—and income could be spread out over a large part of the year, it provided needed income at times when crops or cattle could not be sold. Butter sales depended on proximity to nearby towns, but many ranches as well as farms lay on the outskirts of growing communities filling with Anglo settlers with a taste for butter.

Take Colfax County, for example. Between 1890 and 1910, the county’s population doubled from eight to sixteen thousand. Cimarron village, incorporated in 1900, grew to eight hundred people by 1910, while Raton, the largest town in Colfax County, boasted a population of almost twenty-three thousand. By 1920, the county dairy cow population had grown to about two thousand and farm families there produced seventy-six thousand pounds of butter, selling almost thirty-five thousand pounds yearly. Among the butter-producing ranches of Colfax County was the Chase Ranch, near Cimarron. Nettie Chase was apparently responsible for the butter business developed at the ranch in 1911. Nettie’s butter sold at thirty cents per pound.

Through the first decades of the twentieth century, farm experts assumed women would be making butter on farms. The newly formed Home Economics Extension Service at the New Mexico College of Agriculture and Mechanic Arts in Las Cruces published its first extension circular in May 1915. Dairy Extension Service state leader Dora
Edna Ross included butter making and marketing as one of the topics relevant to farm women. Ross emphasized the farm woman’s economic importance “as a producer and a partner in the business of farming” and urged women to value their economic role on the farm. As late as December 1915, an extension circular asked such questions as: “Which is more profitable, to sell cream or make butter?” and “Does it pay the housewife to make butter for market?” Ross referred farm women to general bulletins for care of milk and cream, not to pamphlets on milking or management of dairies. Later circulars specifically aimed at New Mexico farm people included only poultry as a producer enterprise for women.  

At the same time, male extension agents were already urging men to move into dairying rather than encouraging women to expand their butter-making enterprises. When the new state leader for Dairy Extension, R. W. Latta, produced his “First Lessons in Dairying in New Mexico” in June 1915, he did not mention women at all. Latta showed a barrel churn and a combined churn-and-butter worker (a device that compressed the butter to extract the liquid whey after churning) that could produce fifty pounds of butter, evidence that he expected New Mexicans to process butter. He listed butter making “for a high-class private trade” as second in profitability, however, and emphasized selling cream to a creamery rather than marketing dairy products to stores, one of the ways in which women had traditionally marketed their butter. Nor did he mention that women might be doing much of the care of milk and cream, separating the cream from the milk, or milking. One telltale sentence hinting at the newness of dairying for men appeared buried in a paragraph on milking. “Some men are naturally good milkers,” he wrote, “and others cannot become expert milkers.” He referred explicitly to the “dairyman” in his concluding section and listed his qualities: “The successful dairyman must like cows and all the work, must be keen to learn and attentive to details, active in cooperation, and determined to win.”  

Butter making seems to have declined after the first decades of the century. This was not just because of the lack of encouragement women received to continue to perfect and refine their butter-making skills. Prices did not justify the effort. For example, in 1923, butter produced on the Chase Ranch sold for fifty cents per pound—a good price—but the following year prices dropped to thirty-five cents per pound, while the price and demand for cream and milk rose steadily. Cream sold for
twenty cents per pint and milk for twelve cents per quart in 1929, by which time the Chase Ranch had a daily delivery route and a growing number of customers. The replacement of butter sales with those of milk and cream on the Chase Ranch followed a trend in the state at large.20

BUTTERFAT AND CREAM TAKE OVER

In his 1915 extension bulletin on dairying, Agent Latta urged farmers to look to sales of butterfat rather than butter because butterfat sold for forty to fifty cents per pound and the demand for it was greater. Agents offered farmers instructions on how to build silos to provide winter feed and expand milk production. By 1917, farmers were building the first concrete silos in New Mexico (Fig. 2). Extension agents also set up dairy calf clubs for the children of farm families. Agents helped obtain better breeds of calves at low prices, then taught them how to care for properly care for the animals, so that the cows, when mature, would give more milk (Fig. 3). The entire family thus became involved in producing more butterfat.21

Statistics gathered in agricultural censuses track the change from selling butter to marketing butterfat and cream. In 1909, New Mexico farm people produced almost eleven million gallons of milk and half a million pounds of butter and sold about ten thousand pounds each of cream and butter. By 1924, butter production had increased very little, milk production had only doubled, and sales of fresh cream had increased by 240 percent. Butterfat sales to creameries jumped by 1,200 percent, a figure that points to the development of small creameries throughout the state during the 1920s.22

These creameries did not develop in cream-producing rural neighborhoods. Instead, owners located them in towns where railway shipping facilities were good. In some cases, local agents purchased the cream; in others, the producers shipped the cream themselves. Generally, these centralized creameries processed cream that came from within a fifty-mile radius, but occasionally they processed cream coming from as far away as four hundred miles. Without refrigeration, this “butterfat” cream was sour by the time it arrived, but once pasteurized (pasteurization was introduced in 1910) and neutralized with lime-water, creameries made a fair grade of butter from it. Thus, poor roads
Figure 2. Building a concrete silo on the C. H. Stith farm near Mesilla in Doña Ana County, 1917. Agricultural agents began encouraging dairy farmers to build silos in the 1910s. In areas of the country with plentiful wood, the first silos were wooden, but agents soon advised that more durable materials be used. In New Mexico, concrete silos such as this were built quite early. Here, the men use a slip form for pouring the concrete. Rio Grande Historical Collections, New Mexico State University Library, Las Cruces, RG78-82-5.
Figure 3. New Mexico Extension Dairy Calf Club, Bluewater, Valencia (now Cibola) County, 1926. Although extension agents originally started Calf Clubs only for boys in the 1910s, by the 1920s both girls and boys eagerly participated. Calf-raising was popular among farm children as small dairies spread throughout the state. Rio Grande Historical Collections, New Mexico State University Library, Las Cruces, RG89-76.

and lack of refrigeration during transport were not initially deterrents to the development of creameries. Farm families took the cream in ten-gallon milk cans to local collectors by wagon and later by car. From there the cans went to creameries by truck or by rail.23

One way to place the development of butterfat dairying is on the Zuni Plateau in Catron County. In 1940, Farm Security photographer Russell Lee and his wife Jean visited the small homesteading community of Pie Town, forty miles west of Magdalena. Among the hundreds of photographs that Lee took during his two weeks in Pie Town are a number of Doris and Faro Caudill milking cows and processing milk
Figure 4. Doris and Faro Caudill milking on their homesteaded farm near Pie Town, Catron County, June 1940. Photographer Russell Lee spent several weeks in Pie Town photographing homesteaders at work and play for the Farm Security Administration. The Caudill dairy of six cows was typical of small milk enterprises. USDA, Farm Security Administration, Library of Congress, Washington, D.C., LC-USF 34-36635.

(Fig. 4). Other pictures show cream separator parts and milk pails drying in the sun (Fig. 5). The captions, prepared by Jean Lee, explain that milk was separated and the cream sent to creameries.

Although best known as pinto bean producers, these Zuni Plateau farms were part of a marketing network for cream that had been developing for some years. Decreasing prices for pinto beans and low rainfall had made pinto bean farming less profitable for the homesteaders who settled west of Magdalena in the 1930s. Both extension agents and the USDA suggested that these homesteaders diversify with small-scale dairying as a way to stabilize family income. The correspondence and
Figure 5. The Caudill cream separator air drying, 1940. Cream separators had changed little since the late 1890s when they first allowed small farm dairies to separate milk at home and send only cream to the centralized creameries. After separating their cream, the Caudills sent it to Magdalena by car over newly paved roads. USDA, Farm Security Administration, Library of Congress, Washington, D.C., LC-USF 34-36590.
reports of these agents tell us a great deal about the transition from butter making to cream separating in New Mexico in the 1920s and 1930s, when the small creameries began to flourish.

A few families living in the Pie Town area established dairies early in the 1920s. Bernadine, the daughter of Martha and Grover Powell, remembered that her family had lots of cows and a hired hand who took care of and milked them. Her mother, Bernadine boasted, made such good butter that people came from Magdalena to buy it by the fifty-pound lot. Her father sold what was left over in nearby Quemado. Martha did not have a cream separator; they only had a four-gallon dasher churn.\textsuperscript{24}

Profitable ventures such as those by the Powells made the idea of dairies familiar to the homesteaders. Soon families were spending surplus income to buy cream separators. While butter making took considerable time and skill, cream separating was quick and relatively easy to learn. By the early 1930s, a number of Pie Town homesteaders were supplementing their cash income from pinto beans by raising three to six cows and selling surplus cream. When the cows freshened in summer, the women separated the cream and sent it to Magdalena for railway shipment to other parts of New Mexico. The Magdalena train dropped off milk cans at the Socorro creamery and took cream as far south as Clovis and as far north as Raton. Some cream even went across the border into Colorado.\textsuperscript{25}

By the late 1930s, a few Pie Town homesteaders had well-established home dairy industries. With the improvement of both trucks and roads, creameries began to send out trucks to pick up cream. Pie Town families took cream to the town store once a week, where trucks from Socorro and Las Cruces creameries made regular pickups. On average, cream sales brought $125 into the Pie Town community weekly, a significant help for families in buying groceries. In 1938, the newly arrived Catron County extension agent, Judge Garrett, urged farmers to consider trench silos to preserve and store dairy feed, thereby extending the season when cows produced milk and increasing cream sales. The Farm Security Administration even made loans to purchase dairy cattle. One farm family built a silo to preserve corn for their eight cows. Ensilage doubled milk production and increased its butterfat content. The family’s dairy sales netted enough to pay for all their living expenses. These family dairies relied on the unpaid labor of the family.\textsuperscript{26}
In 1943, the Department of Agriculture did an extensive study of farm income on the Zuni Plateau, the area that included Pie Town and most of the new homesteads. The report's author, Orval Goodsell, refused to call these "dairy enterprises" because the stock was of mixed breed and families milked only in the summer months. He preferred the term "milkstock enterprise." Nevertheless, the numbers carefully collected by USDA agents compelled Goodsell to conclude that dairying was crucial to the success of the farms. Of the three major farm enterprises, beef brought in very little cash, pinto bean crops could fail in time of drought, but dairying could survive even hard times. By storing feed for their cows ahead of time, farmers could continue to obtain cash incomes through a dry year. Weekly cream checks produced cash flow for a longer part of the year. Moreover, cows could be raised on all soil types. According to Goodsell's calculations, milk stock profit per crop-acre-unit was about four times greater than that from beef stock, and almost twice as profitable as beans. If farm operators kept their herds limited to ten or fifteen cows and used family labor, they could turn their operations into profitable enterprises.²⁷

Such small dairies intensified the labor of the farm family. Adult males expanded corn acreage, built silos, arranged for fodder and winter shelter for the cows, kept barns clean, and occasionally helped with the milking. Older children raised dairy calves and helped with planting, harvesting, feeding, and milking. Women also raised calves. They did much of the milking, saw that the milk was carefully strained and separated, washed the pails and separator parts, and readied the cream for market. Either women or men would take the ten-gallon milk cans to the pickup stations. Tasks were gendered, but the enterprise involved integrated and cooperative family labor. Such intensification of labor within farm families allowed the increase of milk products in New Mexico during the 1920s and 1930s.

"The Dairyman's Wife"

World War II brought an end to the expansion of small dairies in Catron County. Homesteading families gradually abandoned Zuni Plateau farms for jobs in urban areas that offered steady cash income. Other families who worked small farms also gradually gave up the hard work and low incomes that had marked the Great Depression years.
Extension experts advised greater commercialization of the remaining farms and discouraged sales of butterfat to small creameries as not profitable enough to support this type of farming. Ballooning urban populations increased the demand for whole milk and government agents encouraged increased production of milk on fewer, larger, more scientifically run farms. The polio epidemic of the early 1950s and public fear that contaminated milk might be spreading the disease brought wide public support for more control over restricted sources of milk supply.28

During the 1950s, USDA farm policy reversed. Now, agents advised farmers to specialize, depend on hired labor, and increase their commitment to technology. They recommended that dairy owners receive specialized dairy training, preferably at land-grant universities.
Dairy experts, who emphasized the role of scientific training for dairy owners, saw little role for women in the new dairying system. They expected that the new generation of dairy experts would be men. According to extension theories and the policies based upon them, family labor would have little to do with the actual running of the dairy. Coming after an intense involvement of women in dairying for hundreds of years, and especially after wartime appreciation for women's labor, women's postwar role in dairying seemed meager indeed.

Dissatisfaction with the new theories about women's role is most clearly articulated in the writings of Gina Allen, who wrote a column for *The Western Dairy Journal* from the Allen Acres Dairy Farm in Las Cruces. Gina was raised in the Black Hills of South Dakota and had married Ted Allen before graduating from Northwestern University in 1940. They had moved to Stillwater, Oklahoma, in 1943 where Ted taught chemistry to Army recruits at the agricultural school while Gina learned farming on a rented farm. After the family moved to Las Cruces in 1945, she described her experiences in a warm and humorous account called *Rustics for Keeps*. Along with their new baby daughter, the Allens settled down on a seventy-acre farm and, with the financial help of relatives, established the Allen Acres Dairy Farm. The Allens hired a worker to run their milking parlor (Fig. 6), but Gina participated in all the routine dairy and farming tasks. In addition to driving a tractor, milking cows, and delivering milk, Gina cared for animals, raised a garden, and canned fruits and vegetables. At Allen Acres, Gina explained later, "the idea was that anybody should be able to take over wherever needed." Ted was active in the local Farm Bureau, she recalled, but she could not be because "they were very much into sex roles and woman's place was in the kitchen." But both Ted and Gina were active in the Guernsey Cattle Breeders' Association and other dairy and cattle organizations. Gina's daughter Ginita posed for a cover of the *Guernsey Breeders' Journal* in 1956 (Fig. 7).

"The Dairyman's Wife," Allen's column in *The Western Dairy Journal*, mingled breezy, chatty observations about local dairy life with comments on national and regional conferences. Allen had introduced her young daughter to dairying by having her raise a heifer, teaching her about farm life, and projecting a future for her as a "dairyman's wife." Still, the current status of women in the dairy profession troubled Allen as she prepared her daughter for a career in dairying. She expect-
Figure 7. Ginita Allen and a Guernsey calf from the Allen Acres Dairy Farm in Las Cruces pose for the 1 February 1956 cover of *Guernsey Breeders' Journal*. Gina Allen wrote that she was training her daughter to be a dairyman's wife. Instead, Ginita became a highly successful investment broker. Rio Grande Historical Collections, New Mexico State University Library, Las Cruces, RG83-134.
ed her daughter to have problems even as the “dairyman’s wife” because of the way agricultural institutions were structured.  

Allen used a young neighbor named “Willa” to illustrate the restrictions her daughter would face. Willa loved animals and farming, wrote Allen, but when she started high school Willa was barred from taking agricultural courses because of her sex. The local agricultural college at Las Cruces did allow Willa to take agricultural courses (most of the agricultural colleges at the time did not enroll women), but college officials rejected Willa’s application for a summer scholarship to work in a Guernsey dairy, again, because she was a girl.

Willa then gained practical experience by managing the family farm while her father was away and her brother served in the Army. Denied specialized training because she was female, and despite firsthand experience, Willa could not hope to manage her own dairy once her father and brother resumed their traditional roles on the farm. The Allens hired Willa one summer as their assistant herdsman, but her future rested primarily on her role as a “dairyman’s wife,” not as a “dairywoman” who ran her own or her family’s dairy.

Allen did not apologize for this role as “dairyman’s wife,” but she argued that women and men would benefit from more equal formal education. She recommended that young boys take home economics and young girls farm mechanics so that their labor could be more flexible on the farm. The division of courses by sex meant that men could not take care of themselves in family emergencies when women were disabled or absent from the farm. And women needed to have formal agricultural training because they, in turn, would have to take over men’s jobs in emergencies and perhaps run dairies if their husbands died. Moreover, women’s roles were crucial to the success of dairying.

“I’ve read lots of learned articles on ‘The Future of Dairying,’” Allen wrote in her July 1957 column, “and I’ve never yet seen the dairyman’s wife listed as an important factor in the future . . . [yet] very often its labor that makes the difference between profit and loss.” To make her point, Allen enumerated the tasks of the dairyman’s wife: milker, calf midwife, stand-in manager, gofer, bookkeeper, and promoter of dairy affairs. She described dairymen’s wives as women in jeans and boots with manure on them who on occasion had to manage dairy princess contests and show up at conference dances in nice dresses. “The dairyman’s wife,” she concluded, “is always on hand, and ready, and working.”
This complicated role for dairy wives certainly did not decrease on small farms. It continued as long as small dairies existed. But the control of the larger dairies almost always remained firmly in the hands of dairy husbands as dairying continued to shift from small to large milk processing farms. Like many families, the Allens sold their dairy in the 1960s. The Allens’ daughter never became a “dairyman’s wife,” and we do not know what happened to “Willa.”

**THE ARRIVAL OF MILK PROCESSING AND HOLSTEIN**

After the 1950s, dairies tended to be of two types. A few large bulk milk dairies, located at considerable distances from urban areas, shipped large quantities of milk to processing plants. More numerous were the smaller fluid milk dairies that continued to ring urban areas, providing milk directly to consumers. Small fluid milk dairies of this type, many of them owned by Hispanic families, were located in Bernalillo County where they provided milk for the growing Albuquerque population. When raising cows, Hispanic men and women usually shared the same gendered division of labor as Anglo families. Hispanic women performed all the duties of “dairymen’s wives.” They also sometimes worked in bottling plants (Fig. 8). These small family dairies continued until the late 1980s when the expanding suburban population made the land too expensive to retain as dairies. Suburban dwellers also found farm odors offensive and urged tighter restrictions. Increasing land values and tighter regulations led most farmers to sell out, either leaving the dairy business or, if they could afford to increase the size of their herds, relocating to more remote areas of the state.34

In the eastern part of the state, a shift to large-scale commercial milk processing de-emphasized the role of family labor in theory if not always in fact. A study of dairying in Curry, Roosevelt, and Quay counties from 1940 to 1950 showed the shift to milk processing already well underway. During the 1930s, the tricounty area had produced dairy products in much the same way as the farmers of the Zuni Plateau. Farms had a few cows that provided milk for home use as well as surplus for sale. During the 1940s, as farms commercialized, there was a decrease in the number of dairy cows and farms and an increase in farm size. By 1950, the number of farms in the three-county area reporting cows being milked declined by 21 percent, and the number of cows by
Figure 8. An unidentified woman employee bottles milk at the William McIlhaney Dairy in Albuquerque, New Mexico, in the 1970s. Rio Grande Historical Collections, New Mexico State University Library, Las Cruces, RG98-080-9.
31 percent. Farms reporting sale of whole milk increased by almost 50 percent. The amount of milk sold increased by over 200 percent. Rather than small herds of six to eight cows, dairy farms now had medium-sized herds, with ten to forty cows. These seemingly inconsistent trends—fewer cows but increased milk production—were the result of major changes in dairying practices: introduction of new breeds of cows, the availability of new milking equipment, and the use of silage or purchased feeds year round.35

During these years, the black-and-white Holstein became the cow of choice for New Mexico dairies. Until the 1930s, most family dairies used inexpensive mixed breeds. By the 1940s and early 1950s, Guernsey cows had become popular because their high milk production and butterfat content—about 4.8 percent—brought greater creamery payments. Urban populations also enjoyed the extra cream they found at the top of their home-delivered bottled milk. By the 1950s, agricultural experts were recommending Holsteins as more efficient producers. Holsteins were also more expensive—in 1954, each head cost almost three hundred dollars—but for dairy farmers who could afford them, Holsteins produced more milk containing over 3.5 percent butterfat content at lower feed costs. By 1953, Holsteins were producing 6,800 pounds of milk per year. These larger Holsteins were more difficult to hand-milk, but new electrical milking equipment was available. This equipment, which cost from six hundred dollars to $2,800, replaced hand milking and cream separating. Milk went directly from the cow into a pipe line that took it to large holding tanks. One person could now manage the milking of a much larger herd.36

Finally, dairies shifted to a new feeding regime. The change in feeding practices came about in part because of the 1950s drought. Because the three counties of Curry, Roosevelt, and Quay had drought conditions during the early 1950s, most producers had to purchase concentrates and roughages. Instead of producing greater quantities during summers when pasturage was available, herds, supplemented by silage to extend the season, now produced more milk in the winter months and relied entirely upon silage or purchased feeds. Since no field crops could be grown during these drought years, only dairy farms that switched to the new system survived. Purchased feed also took less family labor, both to raise the feed and to move the herds out to pasture. During the worst year of the drought, 1953, the government provided drought relief in the form of feed grain, but some farms had to purchase...
as much as six thousand dollars' worth of feed from New Mexico and Texas. Despite the decline in the total number of cows, then, these three counties had more milk cows than any other area in New Mexico and accounted for one-quarter of all the cows in the state by 1950.37

The market for the milk from these eastern New Mexico dairies was both local and interstate. The population of the three counties increased by 20 percent as Clovis, Portales, and Tucumcari became principal consuming centers. The new interstate highway system and the development of large milk-processing and distributing plants enabled dairies to send their milk to more distant plants as well. Much of the milk went farther away. Amarillo, El Paso, Lubbock, and Plainview, Texas, and Roswell, New Mexico, operated milk collection routes in the three counties. Plant owners contracted truck owners to collect milk in cans from producers and deliver it to the plants daily. The producers paid a flat trucking fee per one hundred pounds of milk or butterfat for the trucking costs, an amount that was deducted from the gross sale value of the milk.

All these changes brought economies of scale—that is, the larger the dairy and capital investment, the lower the per-unit cost. Thus, while the drought brought a drop in milk prices, the decrease in costs could still increase income for the fewer, but larger, dairies that survived.38

Family labor was still the basis for profitability, as most dairies remained family operated. Feeding, milking, handling milk, cleaning equipment and buildings, and other chores related to the dairy enterprise were managed by the cooperative work of all able family members, male and female. There were just fewer family dairies. By the early 1970s, there were only thirty-five dairies supplying milk to the local Associated Milk Producers from Roosevelt County. Some of the owners of these dairies could trace their beginnings to milking a few cows on their home farms as youths. Curry Stroud, for example went from four cows in the early 1940s to nearly two hundred that he cared for with his two sons. But the days when a daughter or son could receive a good Jersey cow as a wedding present from their parents and build up a small dairy were over. They had to start with a large herd by accumulating the capital to buy into their parents' business or inheriting it from them.39
FROM MILK CANS TO BULK-TANK MILKING

By 1956, the year of the eastern New Mexico study, another change was beginning to affect these family dairies. Milk buying and distributing firms were exchanging ten-gallon milk cans for large bulk tanks to collect milk at the farm. Bulk tanks benefited both processors and large dairy operators. Because they could more efficiently handle large quantities of milk, they required fewer workers and less equipment. By contrast, the impact of bulk tanks made it almost impossible for producers with medium-sized herds to survive. Bulk containment methods and alternate-day collections meant families had to purchase at least one 100-gallon bulk tank and remodel their milk rooms.

When such changes did indeed take place in the late 1950s, another layer of family dairies closed down and the remaining ones were forced to increase the size of their herds. Producers in Roosevelt County were poised to take advantage of important changes in fast-growing major urban areas. Although Albuquerque, Dallas, and Houston were all hundreds of miles away, the remaining Roosevelt County dairies expanded to meet the demand as many smaller dairies closed in nearby counties. Now, economics dictated that milk be sent long distances in modern vacuum-tank transport systems to processors, instead of sending feed long distances to dairy herds close to consumers. Roosevelt County had dependable supplies of high quality alfalfa hay from the Pecos Valley and local supplies of both corn and milo. The year-round, local availability of roughage and concentrates enabled dairy farmers to manipulate the quality and quantity of milk production. Thus, they targeted market periods after summer surpluses dropped, when prices were better.

Central to this new system was a newly expanded producer cooperative, the Associated Milk Producers, Inc., known as AMPI for short. AMPI was established in 1969 and operated in three regions. New Mexico was part of the Western Division along with western Texas and southwestern Colorado. Roosevelt, Lea, Chaves, Curry, Quay, DeBaca, and Estancia comprised District 8. The local AMPI center in Portales maintained eight milk transports that picked up milk daily at four large producers and every other day at the other thirty-two dairies. Daily runs averaged almost three hundred thousand pounds of milk. AMPI, in turn, distributed milk to the Lucerne milk plant and other dairies in Roswell, as well as to dairies in Amarillo and Lubbock. Weekend loads went to
a factory in Munster, Texas, that produced cheese, butter, and powdered milk.

Bulk tanking facilitated increased production of milk and expansion of dairy size. It sheared off yet another layer of smaller family dairy producers who could not afford the equipment to allow them to take advantage of the new marketing system. The consolidation and expansion of dairies also led to greater involvement of the USDA in supervising marketing.

As milk production became a large-scale industry, producers became more involved in Federal policies. The government had been setting minimum milk prices since the early 1930s, but participation was voluntary. Once a group of producers requested inclusion, the government issued what was called a “Federal Milk Order,” setting up an administrative procedure to apply the appropriate regulations. Usually, only dairy owners involved in interstate commerce asked to be included. Few New Mexico dairies had such interests until the late 1970s. One 1976 government document listed only 191 New Mexico producers under Federal milk orders. The state had no milk price control program. Bulk tank trucks and the expansion of producer cooperatives led eastern New Mexico dairy owners to request inclusion in the price support program. The program did not control production or the volume marketed, but regulations did encourage producers to respond to market demand. It became increasingly difficult by the late 1970s for producers to survive outside the system. Cooperatives and processors preferred to work with larger dairies. The government tried to make the system fair for smaller dairies, but the large feedlot-type dairies, with controlled year-round feed supplies, which belonged to the large producer cooperatives, fared better than smaller independent dairies with green summer pastures and seasonal markets.

The final consolidation occurred during the dairy herd buyout of 1985. The buyout program, administered by the USDA through the Agricultural Stabilization and Conservation Service, had as its goal the reduction of milk production. The program was conceived of as a savings for the government because the milk price support program was costing the government eighteen dollars per one hundred pounds. The cost of the buyout was $15.50 per hundred weight. In addition, the government assessed the remaining producers one-third of the buyout costs. The goal was to reduce annual milk production by twelve billion pounds nationwide. The program was to cut fourteen million pounds in
Roosevelt County. Eventually, nine dairymen bid for the program. When they had disposed of their herds, the number of dairies was reduced by 25 percent, from thirty-six to twenty-seven; the number of cows, heifers and calves, by around 1,500, from 7,500 dairy cattle to six thousand; and milk production by fourteen million pounds, from seventy-five million pounds of milk yearly to sixty-one million. Dairies that reduced their herds were prohibited from returning to the dairying business for five years.43

Interviews with dairy families getting out of the business, conducted by Portales News-Tribune staff writer Victoria Raun, revealed some of the effects of the program. All of these dairy families were handling large herds of between one hundred and two hundred cows, but many were long-time farm families ready to retire. Betty Rowland of Floyd said she and her husband planned to retire after selling their 161 cows and fifty-four heifers for slaughter. Mary Brown, of Dora, told Raun that she and her husband also planned to retire after thirty-four years in the dairy business. She had mixed feelings about leaving dairying. They owned one of the older dairies that had made the transition to large-scale dairying. “It's been a good living, it educated our daughter and paid for our farm,” she said. Brown worried that their departure would hurt the economy and the community. They sold one hundred head for slaughter. Bonnie Nandino, of Elida, explained that they were not doing too well in the dairy business and the buyout program was going to allow them to come out debt-free. The Nandinos planned to sell most of their herd to buyers in Mexico. With the proceeds, they would pay the loan on the cows and most of the mortgage on the house. The comments of these women seem to indicate that the older or less successful farm families were taking this opportunity to get out of the dairy business.44

FEEDLOT DAIRIES

While bulk-milk family dairies continued to operate in New Mexico after the buyout of 1985, by far the fastest growing operation was the large-scale drylot dairy. By the 1980s, there were already nine-hundred-head drylot Holstein dairies in operation in southern New Mexico. A study published in 1984 by the New Mexico State University Agricultural Experiment Station revealed the way that dairying had
become big business. Each cow, the report concluded, cost $1,990 per year to maintain and brought an annual income of $2,096. Such relatively low income per cow was still profitable because over a twenty-year period the return was 5.9 percent in real, after-tax dollars. The main problem for drylot owners was ensuring low feeding costs and gauging the effect of government policies. Gone was most of the family labor, replaced by a “12 man labor force” that operated the milking pits and performed the other work needed. Milk was cooled and stored in a six-thousand-gallon bulk tank, and a railroad water-tank car with thirteen-thousand-gallon capacity washed cows and equipment and distributed water to troughs. Studies like this helped fuel the dairy expan-
sion of the 1990s by showing corporations that they could make a profit with large-scale operations. During the 1990s, a number of corporate dairies sold their valuable land in California and moved herds to low-priced acreage in Chaves County. Low land costs, combined with high-grade easily available alfalfa, and dry sunny weather made these moves highly profitable. By 1991, producers in New Mexico had their own trade association, the Dairy Producers of New Mexico. The association was active on both local and state levels in looking after the interests of the growing dairy industry.45

The availability of low-cost bulk milk, in turn, made it profitable to establish cheese factories. Beginning in 1994, a number of cheese factories relocated from colder climates to southern New Mexico to take advantage of the abundance of low-cost bulk milk. These cheese factories mainly sold to pizza and hamburger chains across the country. The Tobkin family moved their cheddar cheese plant from Veblin, South Dakota, to Lovington in Lea County. By the time the Dairy Farmers of America was managing this Lovington plant in 1999, it was handling two million pounds of milk a day, most of it from Lea County. F & A Dairy Products relocated from Dresser, Wisconsin, to Doña Ana County in 1995. The F & A factory, high on the west mesa above Las Cruces, processed 120,000 pounds of milk a day from the local area into provolone and mozzarella. In Quay County, the Tucumcari Mountain Cheese Factory specialized in feta cheese, processing one hundred thousand pounds of milk a day from the Clovis and Portales area. Ten dairy farms plan to open the Clovis Cheese factory in Curry County in the fall of 2000. The owners estimate that the plant will need milk from an additional fifty thousand cows, for a total of about three million pounds of milk a day, to process their cheddar, mozzarella, Monterey Jack, and specialty cheeses. These cheese factories, although highly mechanized, employ hundreds of workers and provide processing for over 80 percent of the milk produced in New Mexico. Milk tanker trucks continue to transport this milk from dairy to factory (Fig. 9).46

In 1985, the United States Census still defined a family-managed farm as one that used not more than 1.5 human years of hired labor per year. A decade later, few of the dairies in New Mexico fit this definition. According to New Mexico Cooperative Extension Service Dairy Specialist Michael Looper, however, most of the dairy producing farms remain family owned. Partnerships are the norm, usually a husband and
a wife. Single women or men sometimes own dairies. Two brothers or even unrelated dairymen may also own a dairy jointly.47

With the increasing size of herds and quantity of milk produced by each cow, it is no longer possible for family labor with a few hired workers to manage these dairies. Looper estimates that one person can manage about eighty cows. At that ratio, the Dean and Frances Horton dairy in Hatch—the largest dairy in the state—would need 125 full-time workers. The Hortons devote most of their time to management. So, too, does Jessie Adams, who owns one of the smaller herds (seven hundred cows) in the Hobbs area. She once owned and ran the dairy with her father. When the dairy contained 450 cows, she used to work with their five employees getting the cows out to feed in the pasture and at other tasks involving outdoor work. Now she has no time for that sort of work. Management takes up all of her time. She hires her teenage son to help out part time, but hired workers perform most of the dairy work. New Mexico dairies now employ about three thousand paid workers, most of them male.48

Families still work on their dairy farms, but they seldom milk or care for the cows themselves. They hire full-time specialists. Women and men share management tasks and children work at odd jobs around the home farm. On some dairy farms, family members are hardly involved in the day-to-day business.

Conclusion

Scholars have only begun to evaluate the role of family labor on American dairies. Historian Sarah Elbert, who interviewed contemporary dairy families in New York and Iowa, found that women's farm production roles generally gave women equality with men. Although their tasks now more often take place in farm offices than in barnyards or fields, women continue to see their work as essential.49 Still, Elbert sees the increasing size of family farms as a potential source for conflict. When one member of the family acquires a disproportionate amount of power, it is usually the male owner or partner. Women and children often alternately contest as well as cooperate with him.

Because integration of farm work and life is now less possible than in the past, the importance of the family's contribution is less visible. That invisibility may bring less recognition and hence less job satisfac-
tion. At a time when young women and young men seek specialized training in managing farms, they may contest their traditional disfranchisement on the family farm and ask to inherit part of the property. In addition, it is more difficult for children to obtain farms of their own. In the end, the extent to which a family manages its human resources may be even more important than the way it manages its day-to-day dairying tasks.

The evolution in dairy farming reveals a gradual disappearance of family labor from dairy enterprises in New Mexico. It disappeared as dairies transformed from a few cows and women’s farm-based cheese and butter production to small mixed-breed summer cream production with women still playing a major role; then to medium-sized pure-breed winter milk producers dependent upon one major operator, usually male, but still utilizing family labor; to large drylot dairy operations employing hired labor. Family farms have survived by enlarging their operations to be more competitive, but increased size usually brings with it less family involvement in the business of dairying.

The traditional family dairy could provide a satisfying life, a farm of one’s own, a cooperative enterprise, and the means to teach children the values of hard work and the pleasures of living on the land. There was a dark side as well, for family dairies could be empires where petty tyrants ruled over unwilling, overworked, and dissatisfied workers who were unable to leave because they had no resources of their own. Dairying did give the rural population a chance to be productive, to control their livelihoods, and to contribute to stable communities. It gave family members, including women and children, a way to make their contributions visible and recognized within families.

Today, dairies with their allied cheese-making and powdered milk factories provide growing income and employment for the state. The recent spectacular growth in dairying and allied cheese factories makes New Mexico’s dairy history both similar to and different from the industry’s development in the eastern United States. Part of the history of New Mexico dairying seems to follow the national pattern. Development seems to have progressed from small part-time dairies initially under the control of women and children, to full-family enterprises with men, women, and children all contributing their labor, and subsequently to fewer and larger highly mechanized dairies with hired, mostly male, workers.
Yet New Mexico also has a unique dairying history. It began with goat cheese processing by Native and Hispanic women, a history that needs to be explored. We know little about the small herds of goats that provided milk for the majority of the New Mexico population well into the twentieth century. Other family dairies with small cow herds began to provide milk, butter, and, later, butterfat for local and state consumption in the late nineteenth century. By this time, many other states had already developed large dairy farms. This history is also not well known. It is difficult even to locate the sites of these small dairies and creameries. We know little about the political issues concerning the quality of milk that must have both shaped the market for fluid milk and responded to it. Then, within a few decades, New Mexico became a major dairy producing state, processing cheese for the national market.

It would be useful to know more about this development. It is time to track our state dairy history now that dairying has assumed such a prominent place in the economy. There is much more to be learned about early goat dairying and cheese making, the development of fluid milk producing areas around urban populations, the way in which different regions developed creamery dairying, the role of women and children in providing labor for these dairies, and the changes that new large-scale dairying brought to the economy and families of New Mexico. The time to collect this history is now, while the recent past is still alive in the memories of the many people who participated in making it.

This article is an expanded version of a talk given at the New Mexico Farm & Ranch Heritage Museum in Las Cruces, New Mexico, on 11 September 1998. The author would like to thank Jane O'Cain, Bob Hart, and Rhonda Jackson for their support and helpful research suggestions.
NOTES


3. Alice Lee Marriott, Maria, The Potter of San Ildefonso (Norman: University of Oklahoma Press, 1948), 13-15. This brief account does not mention who did the milking or even if the animals were goats. Most likely, they were goats since few cow herds existed in the territory at the time and goats were very common in northern New Mexico.


12. Washburn, Productive Dairying, 258.

13. Washburn, Productive Dairying, 332; Eckles, Combs, and Macy, Milk and Milk Products, 199.


15. The folder carried testimonials from state agricultural experiment stations and satisfied users all over the country. E. M. Tucker wrote from Ararat, Pennsylvania, “Some have said it would be hard to clean, but my wife has washed and wiped all the parts (including the feeding can) and placed the little discs back in the bowl, in just six minutes, and can do so at any time.” Alex Linsay of Butternut Grove, New York, wrote: “The use of the ‘Baby’ is a daily source of pleasure to my wife. No more carrying milk to and from the house and barn, tracking mud and filth into the house to the disgust and annoyance of the farmer’s wife.” While manufacturers touted the pleasures, farm women found that daily cleaning could be onerous. One woman recalled: “I hated that separator with a purple passion.” Marilyn Irvin Holt, Linoleum, Better Babies, and the Modern Farm Woman, 1890–1930 (Albuquerque: University of New Mexico Press, 1995), 93.


19. R. W. Latta, First Lessons in Dairying in New Mexico, Extension Circular No. 3 (Las Cruces: New Mexico College of Agriculture and Mechanic Arts, 1915), 19-20, 29, 33-34.


24. Kathryn McKee-Roberts, *From the Top of the Mountain: Pie Town, New Mexico and Neighbors* (n.p.: Bishop Printing, 1990), 163-64.

25. McKee-Roberts, *From the Top of the Mountain*, 125, 149.


30. Gina and Ted sold their farm in the 1960s when he accepted the presidency of an agricultural college in Iran. She continued to write, but moved to California where she became active in the women's movement. Her daughter became a very successful financial adviser instead of a dairyman's wife. Jensen, "The Campaign for Women's Community Property Rights," 352.


34. There is no study of either goat or cow dairying among the Hispanic population. Helaria Evaro mentioned continuing to make cheese from cow's milk after her family bought cows. Many Hispanic families owned dairies near Albuquerque and south of Las Cruces.


37. Evans, *Dairy Production in a Dry Farming Area*, 18.

38. Evans, *Dairy Production in a Dry Farming Area*, 7.


43. For problems with the national program, see Lorraine Garkovich, Janet L. Bokemeier, and Barbara Foote, *Harvest of Hope: Family Farming/Farming Families* (Lexington: University Press of Kentucky, 1995), 146-47. The government changed the time from five to ten years after the program had begun and small family dairies found the regulations too complicated. For the effects of the buyout in eastern New Mexico, see “County Lines,” *Portales News-Tribune*, 2 April 1986.


47. Looper, telephone interview by author, 21 February 2000.


Tsianina Redfeather, Santa Fe, New Mexico, 1924. Courtesy Museum of New Mexico, neg. no. 11234. The inscription on the photograph reads, “To Dr. and Mrs. Edgar L. Hewett with sincere admiration and deep appreciation from their devoted Tsianina 1924.”