Sonoma County

Dairy Industry Report

Prepared by:

The Sonoma County Economic Development Board

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Executive Summary

Overview

Agriculture in Sonoma County has had a checkered history of dominance and decline. In recent history, the sudden demise of a flourishing egg and poultry industry in the late 1950s, and the collapse of the apple industry a decade ago, bear witness to the tenuous nature of agriculture in our time.

With this in mind, the Economic Development Board determined to see if it were possible to spot trends in today's local dairy industry that would identify both potential trouble spots as well as opportunities to assure a level of long-term success in the marketplace.

The best place to begin identifying these trends is with those on the front lines of the industry, the local dairy farms and processors. Accordingly, the 2002 Sonoma County Dairy Industry survey was mailed to 114 local dairy operations, and 35 dairies and one processor responded.

From these responses, we determined that the industry is indeed facing difficult challenges. The number of active dairy farms has declined sharply in the past seven years (although total production and herd size have not declined at the same rate).

The Sonoma County Dairy Industry bounced back from difficult times in 2001, though it is hard to tell if this upswing was simply a return to normal or the start of a sustained upward trend. While the duration of local dairies' current fortunes is uncertain, survey results reveal concrete trends taking place within the industry. Local dairies are concerned with the costs of production and profitability, as well as the price of land for expansion, and would like to receive greater assistance in regard to regulations, housing permits, education/job training, and farmstead product research and development. Additionally, survey results reveal that most responding dairies do not feel the local public understands and appreciates the dairy sector, and that more than a third of survey respondents do not expect their dairy to remain operational once it is sold or they retire.

Obstacles to continued success are reported by the dairymen as being the cost of land, restrictive environmental regulations, availability of worker housing, availability of job training, and the need for information about opportunities to develop new products from milk.

The latter, also referred to as farmstead product research and development, was cited by fully one out of every five respondents as a need, and forms the basis for recommendations made in the report. These producers feel there is a need to look at milk marketing in new ways, such as individual dairies producing their own specialty cheeses and other milk related products.

The Economic Development Board's 2002 Sonoma County Dairy Industry Survey was mailed to 114 local dairy operations. Thirty-six entities (35 dairies and one processor responded to the survey, yielding a response rate of 32%. Survey results outlined a number of trends taking place within the local dairy industry. These trends are outlined below.

Findings

1. The price/hundredweight (cwt) of Sonoma County ***market milk*** (milk destined for the bottle) was up 12% in 2001, but 5% below the 1990-2001 annual average. This price was less than 1% greater than the mean milk price (for both market and manufactured milk) respondents indicated as necessary to remain viable in Sonoma County.

2. The price/cwt of Sonoma County ***manufactured milk*** (milk destined for non-fluid dairy products) was up

24% in 2001, though only 2% above the 1990-2001 annual average. This price was 1% greater than the mean milk price respondents indicated as necessary to remain viable in Sonoma County.

4. Respondents identified **environmental laws and regulations** (72% of respondents), **the price of land for expansion** (41%), and **the lack of a long range vision for dairies** in Sonoma County (33%) as the three greatest threats to local dairy industry growth.

5. Twenty-two percent of respondents said they plan to **expand their skilled workforce** in the next year; thirty-three percent said Sonoma County does not provide a sufficient pool of skilled labor, while 36% find it difficult or very difficult to find skilled labor.

6. Sixty-four percent of respondents felt it will be very important for Sonoma County dairies to receive **value-added pricin**g for their products in the future. Currently, 42% of responding dairies produce hormone-free milk, a value-added product, while 8% and 6%, respectively, produce farmstead products or organic milk, other value-added products.

7. Eighty-one percent of survey respondents felt that local residents **"did not understand or appreciate"** the local dairy sector.

8. Responding dairies would like help in regard to **regulatory matters** (47%), **housing permits** (31%), **education and job training** (28%), and **farmstead product research and development** (20%).

9. The **number of local dairies** declined 22% from 152 for fiscal year 1995-1996 to the number of 118 for fiscal year 2002-2003. Also, only 31% of responding dairies expect their **succession plans** to keep their dairy operational (it should be noted, however, that 19% of respondents did not respond to this question).

Opportunities

While there is little any one entity can do to resolve many of these obstacles, and while there are several agencies and programs available to assist with regulatory problems, worker housing, and agriculture-based concerns, little is being done to assist dairy producers in taking advantage of emerging marketing opportunities. The following are opportunities that could be addressed in the short term with potentially beneficial long-term results.

1. Diversification, New Products, Farmstead Activity.

The greatest challenge for producers is a guaranteed long-term market for their product. Given competition from other California geographic regions that enjoy lower land and production costs, the situation becomes ever more critical. However, value added products from local dairy producers could add profitable new lines to annual production. The sudden demise of Select Sonoma County has removed one important avenue for marketing assistance to local producers, and has not been replaced.

The Economic Development Board could institute a comprehensive program of workshops and direct communication with producers to share innovative best practice success stories with local dairies, highlighting opportunities for developing new products from existing milk supplies. These programs can and should be organized in cooperation with the dairy industry representatives, the UC Cooperative Extension, the Agriculture Commissioners office, and other interested parties.

2. Enhancing Community Awareness of the Importance of the Dairy Industry.

The California Milk Advisory Board has expressed interest in the development of a statewide Cheese Festival in Sonoma County. An event of this type would have a number of positive aspects, including contributing to tourism, focusing public awareness on the newly emerging cheese industry in this County, focusing local producer interest on the opportunities inherent in cheese making, and providing cooperative marketing opportunities for the wine industry.

The EDB could work with dairy trade groups to generate statistics and success stories for the local press to help enhance public awareness of the industry's importance.

3. Workforce Development

Opportunities exist for the Sonoma County Workforce Investment Board to create a program for local dairies to offer training and bilingual resources to dairy workers, and to assist with upgrading skills for dairy workers.

4. Regulatory Simplification

The EDB can explore ways to improve the regulatory situation in cooperation with the various regulatory agencies and the dairy sector.

5. Long-Range Vision

The EDB can facilitate understanding of the approach used by the North Bay Technology Roundtable and the Wine Vision Project for the local dairy sector's review.

6. Housing

The EDB can facilitate a dairy presence with various workforce housing efforts underway here.

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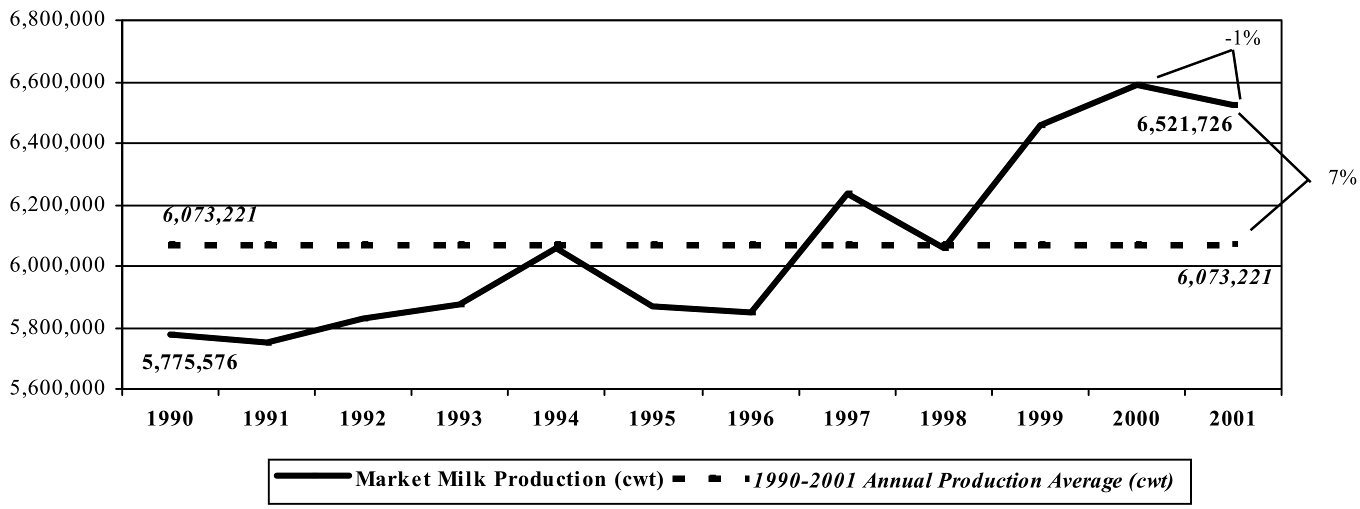
Return to Normal or Sustained Upward Trend?

The Sonoma County Dairy Industry performed very well in 2001. Unfortunately, 2000 was such a dismal year for local producers that 2001's stellar results, when compared with 1990-2001 averages, only returned the industry to relative normalcy in most statistical categories. This scenario is true of the production, price/hundredweight (cwt), and total value figures for Sonoma County *market milk* in 2001, as well as 2001 *manufactured milk* price/cwt statistics; it is not true for 2001 Sonoma County *manufactured milk* production or total value figures.[1] Survey data show many responding dairies need 2001 price/cwt levels to continue or increase in the future in order to remain viable in Sonoma County.

Market Milk

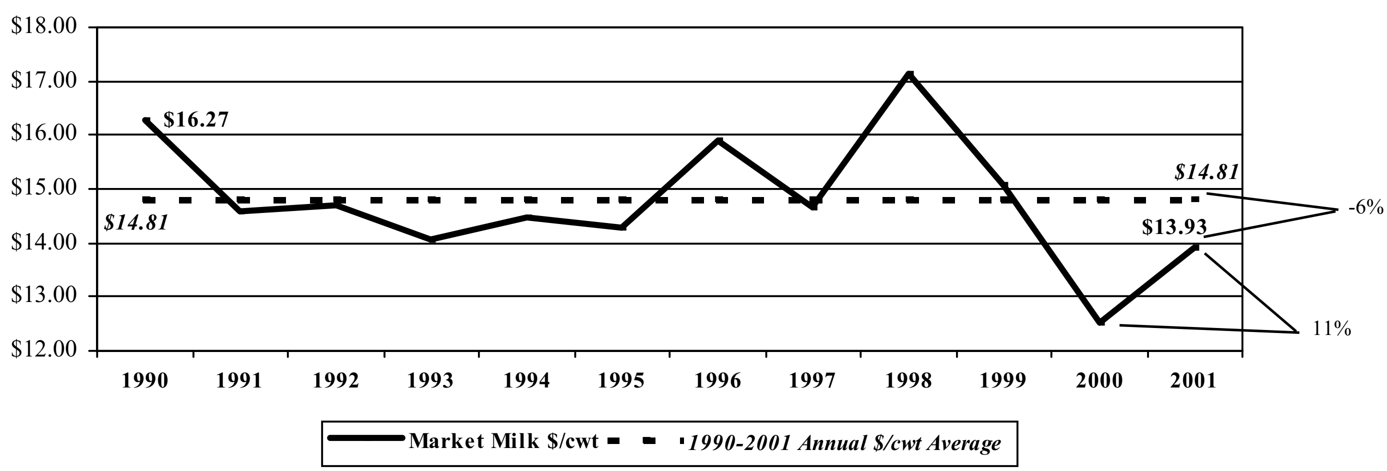
Market milk is milk destined for the bottle. **In 2001, Sonoma County market milk production was down 1% from 2000, but still 7% above the 1990-2001 annual average**:

Sonoma County Market Milk Production (cwt) 1990-2001

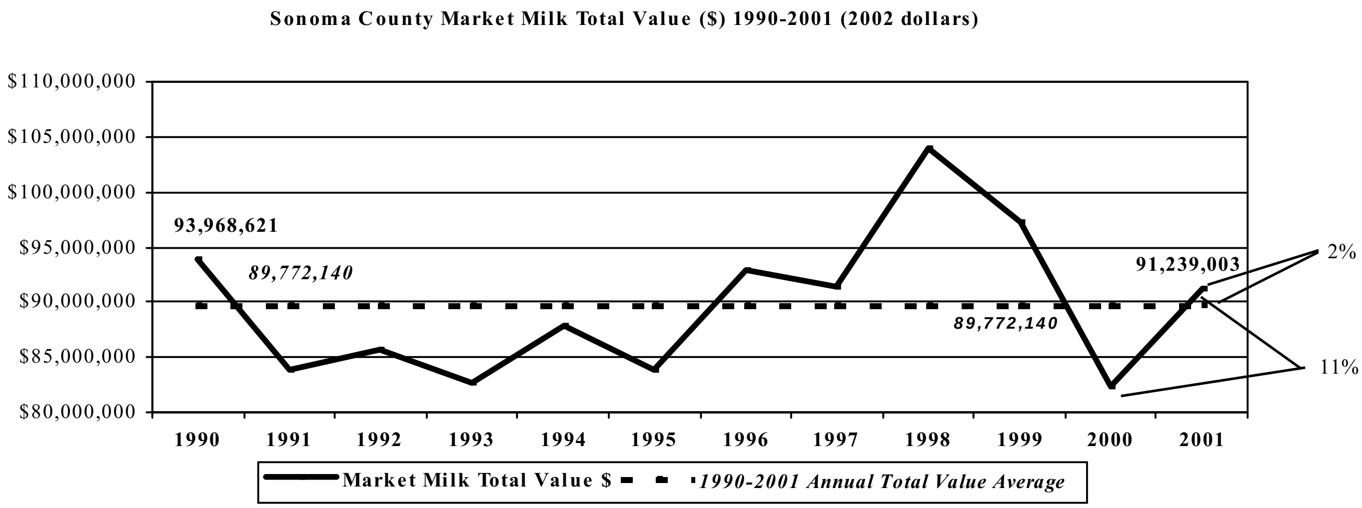


While market milk production was down, average Sonoma County price/cwt was up—11% from 2000—yet still 6% below the 1990-2001 annual average:

Sonoma County Market Milk Price/cwt 1990-2001 (2002 dollars)



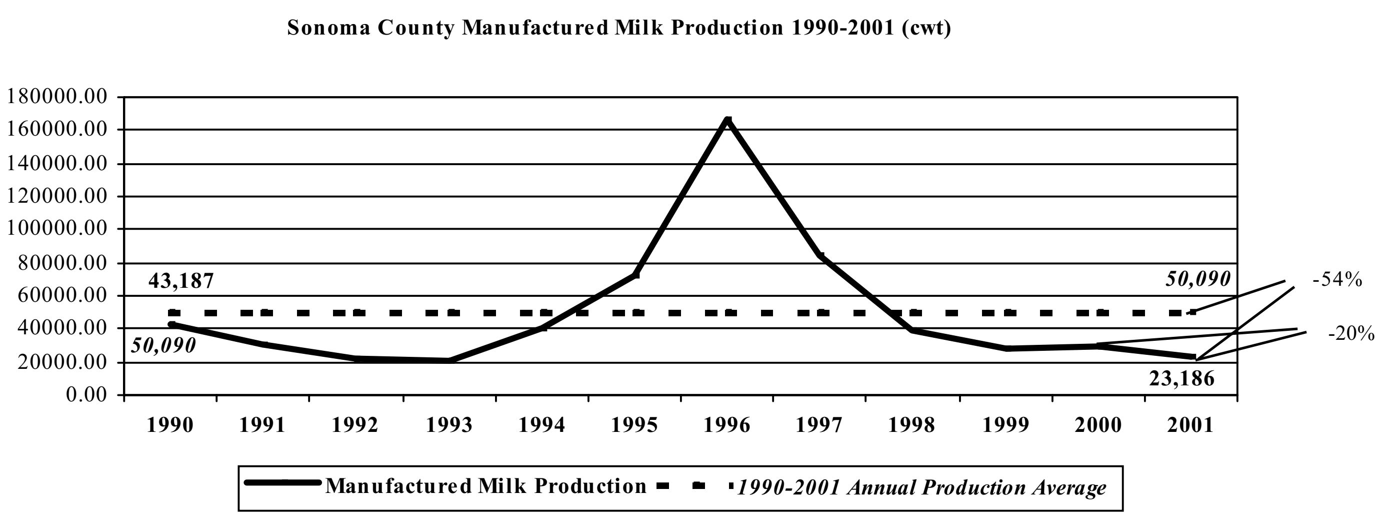
This small drop in production and substantial gain in compensation resulted in an **11% increase in the total value of Sonoma County market milk in 2001, but this figure was only 2% above the 1990-2001 annual average total value for Sonoma County market milk** :



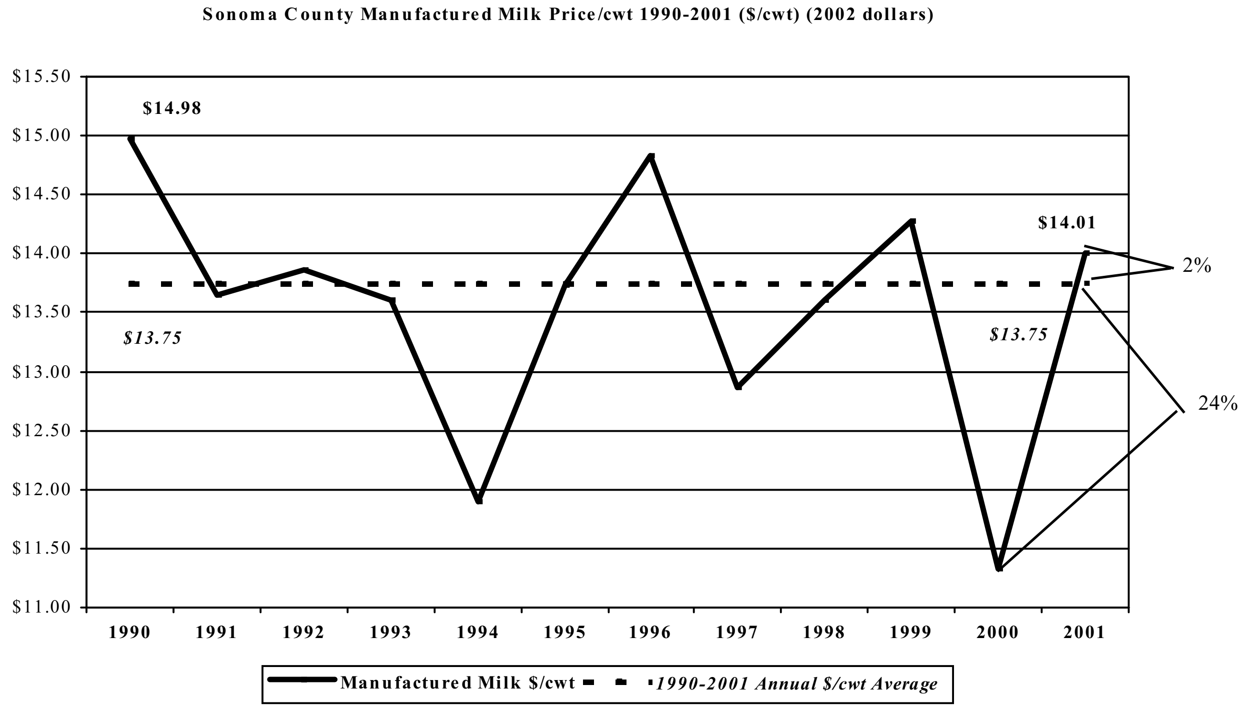
Clearly, market milk in Sonoma County performed exceptionally well in 2001. Unfortunately, 2000 was such a dismal year for Sonoma County market milk that local dairies' strong 2001 performace could only return them to relative normalcy, as seen by the small differences between 2001 figures and 1990-2001 averages. This positive yet sobering scenerio is also true for the price/cwt of 2001 Sonoma County manufactured milk, though not the total production or total value of 2001 Sonoma County manufactured milk, which continued to decline.

Manufactured Milk

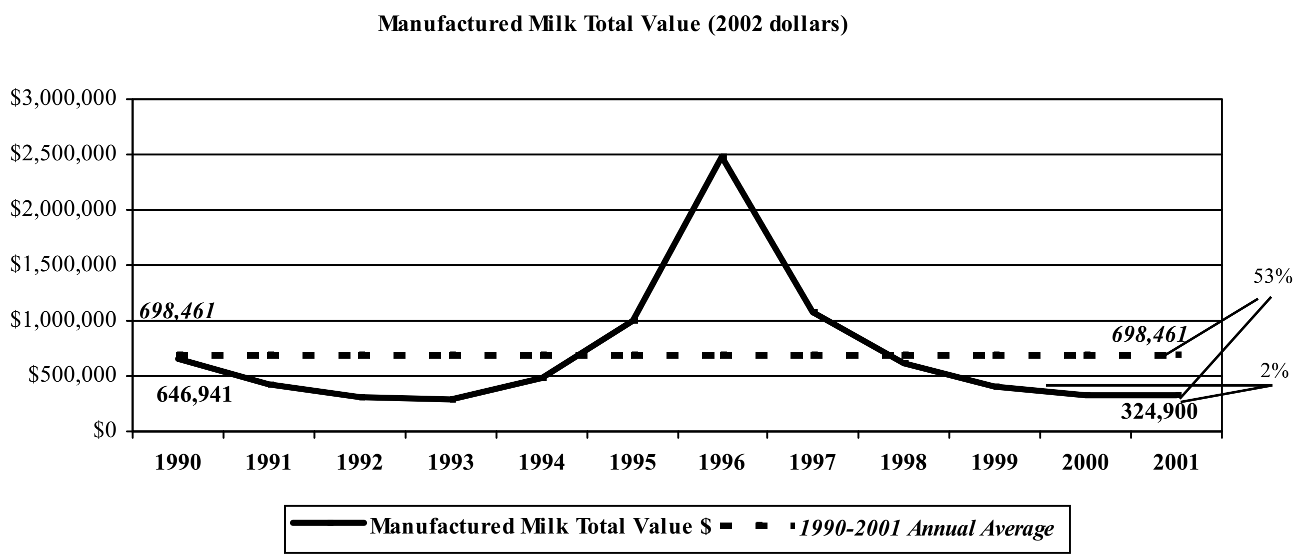
Manufactured milk is milk destined for non-fluid dairy products. **In 2001, the production of manufactured milk in Sonoma County fell 20% from 2000, and was 54% below the 1990-2001 annual production average.** When 1995-1997 production values (the three most productive years in terms of manufactured milk production from 1990-2001) are excluded from this average, 2001 production values are still 25% below the 1990-2001 annual production average:



Conversely, the 2001 price/cwt of manufactured milk in Sonoma County was up 24% from 2000, and 2% above the average 1990-2001 annual price/cwt:

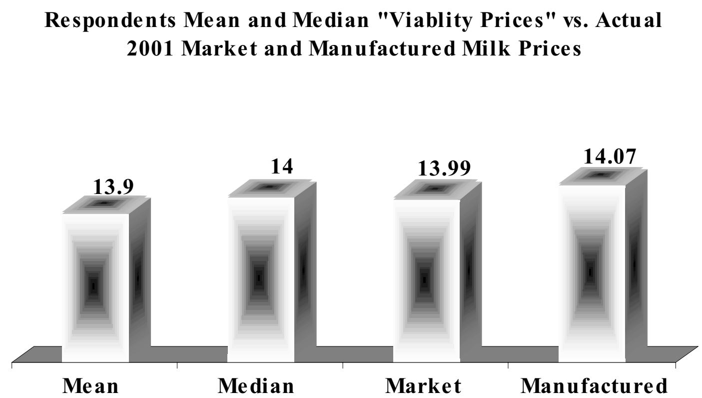


Unfortunately, this increase in price was not enough to offset the fall in 2001 Sonoma County manufactured milk production. **The total value of manufactured milk in Sonoma County fell 2% from 2000 to 2001, and was 53% below the 1990-2001 annual average** (again, even when 1995-1997 values, the three most valuable years in terms of total manufactured milk value in the 1990-2001 period, are excluded from this equation, the total value of Sonoma County manufactured milk in 2001 was 23% below the 1990-2001 annual average):



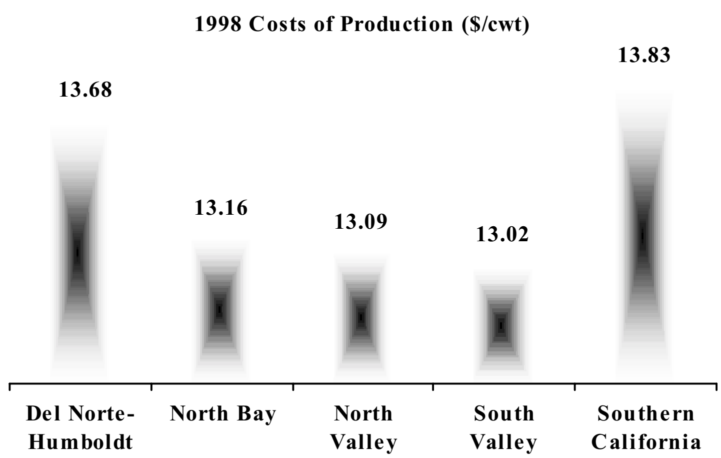
Clearly, 2001 Sonoma County market milk production, price/cwt, and total value figures point to at least a return to normalcy for the local dairy industry, if not the beginning of a sustained upward trend. 2001 manufactured milk price/cwt figures also point in this positive direction, though 2001 Sonoma County manufactured milk production and total value statistics do not.

According to survey data, most responding dairies need 2001 price/cwt values to continue or increase in the future in order to remain viable in Sonoma County. Respondents indicated they need roughly $14.00/cwt to remain viable locally; 2001 market and manufactured milk price/cwt levels were close to or above these figures, but not by much. With margins so tight, it is not surprising that many survey respondents are concerned with higher costs of production.



Production Issues

Twenty-five percent of all respondents ranked a higher cost of production/profitability as one of the three greatest challenges to local dairies in regard to growth. Local dairies can ill-afford significant increases in production costs, as competition from other domestic and international producers is already strong.



Domestically, North Bay dairies (Sonoma, Marin, Mendocino Counties— specific Sonoma County costs of production statistics are not kept by the California Department of Food and Agriculture [CDFA]) already have higher costs of production than their Central Valley competitors.[2] These differences in the cost of production may be exacerbated if raw material costs, a major component of dairy production costs, rise in the near future, as many survey respondents expect. **Seventy-eight percent of respondents expect a rise in raw material costs over the next three years, with a mean expected increase of 15%, and a median and mode expected increase of 10%, respectively.** Because these increases would likely outpace inflation, and because raw material costs make up nearly half of total production costs (47% according to a 1998 CDFA cost of production index),[3] significant increases in raw material costs would have a serious impact on local dairies' cost of production.

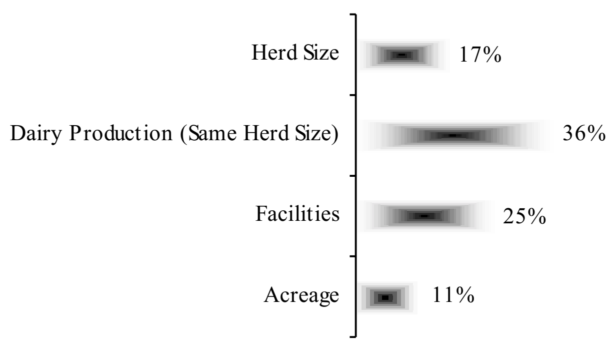
Cost of production increases would make local dairies not only less competitive against Central Valley dairies, but against foreign competitors as well. Survey data suggest that respondents are already concerned by this: **69% of all survey respondents said dairy product imports were a threat to their operation's success.**

Respondents were most concerned with imports from New Zealand, Europe, and Australia. Specific products indentified by respondents as threats to their operation's success included cheese (17% of survey respondents), protein concentrate (11%) and other products (14%) such as raw milk, butter, and non-fat dry milk.

To offset possible increases in production costs and competition from both domestic and international producers, many local dairies may want to expand, produce value-added products such as organic milk or farmstead cheese, or produce non-dairy agricultural products to increase their revenue.

Expansion

Percent of Respondents That Expanded Various Aspects of Their Operation

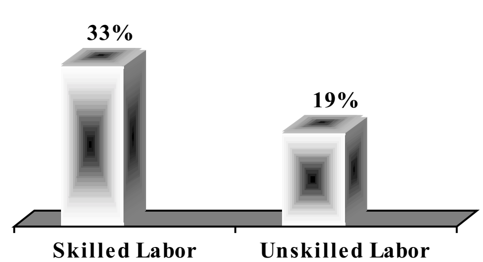


Survey data suggest that local dairies are already concerned with the price of land for expansion, and that many have difficulty finding the skilled labor they may need to expand their operations. **Forty-one percent of all respondents ranked the price of land for expansion as one of the three greatest challenges to future dairy industry growth.** High land prices may have been the reason why relatively few dairies expanded their acreage in the last year, despite fairly significant expansion trends in terms of facilities and dairy production (same herd size).

The price of land for expansion may also explain why most respondents' herd sizes are smaller than the California average. According to the CDFA, the average California total herd size in 2000 was 696 head.[4] By contrast, the mean total herd size among survey respondents was 590 head, while the median and the mode were both 400 head. A given herd size requires a minimum amount of land, and if land prices are high, local dairies may not be able to afford the land necessary to support expanded herds.

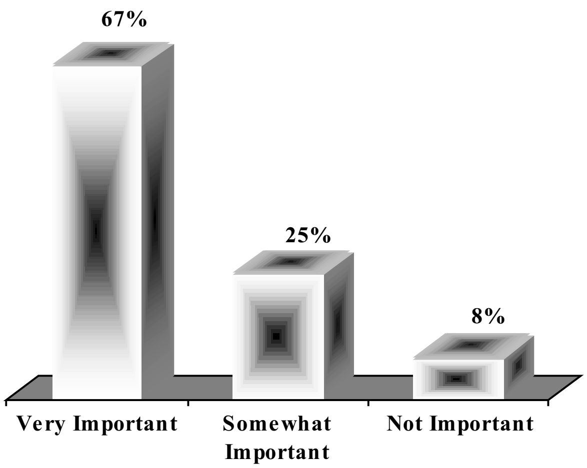
In terms of employment, only **22% of responding dairies plan to expand their skilled workforce over the next year.** Perhaps more of them would hire skilled employees if it were easier for them to find such workers: a third of survey respondents said Sonoma County does not provide a sufficient pool of skilled labor to meet their needs. Contrary to this situation, the availability of unskilled labor does not seem to be a problem for most responding dairies. More than 80% of survey respondents said Sonoma County provides a sufficient pool of unskilled labor to meet their employment needs.

Percent of Respondents Finding That Sonoma County Provides an Insufficient Supply of:



Value-Added Pricing/Products

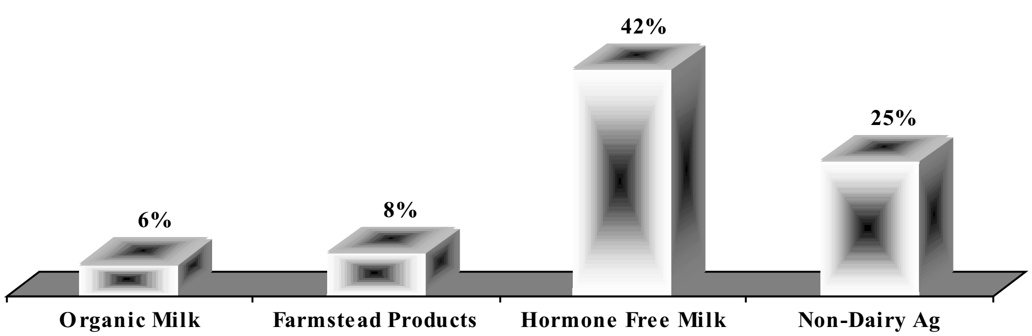
Value-Added Pricing Will Be:



Survey data also shows that many local dairies feel it will be important for Sonoma County dairies to receive value-added pricing, i.e., higher prices for non-traditional products such as organic milk or farmstead cheese (cheese made on a farm from the same farm's milk) for their products in the future. Currently, outside of hormone-free milk, a value-added product that a number of responding dairies produce, very few responding dairies are selling farmstead products or other value-added products such as organic milk. A small number of responding dairies, however, engage in some form of non-dairy agricultural production (mostly wine grapes—17% of all respondents) on their property.

Some local producers have been especially successful with farmstead cheese production, so much so that they were featured in a November 2001 *New York Times* article on farmstead cheese (see p. 30 of this report). Such producers serve as possible models for other dairy producers who would like to venture into farmstead cheese making, and their example could be used as part of a farmstead cheese seminar to illustrate to interested producers the difficulty and potential inherent in farmstead cheese making.

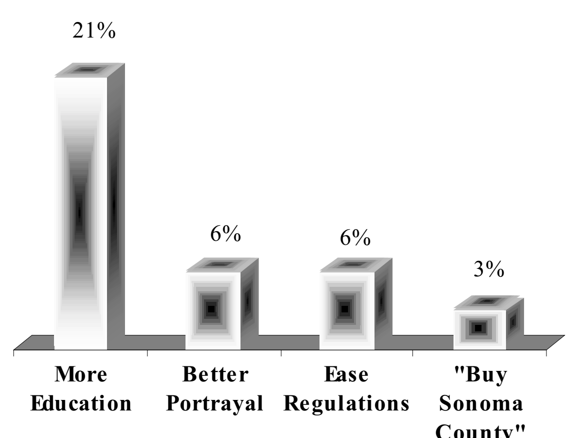
Respondents Producing Value-Added or Non-Dairy Agricultural Products



Understanding/County Help

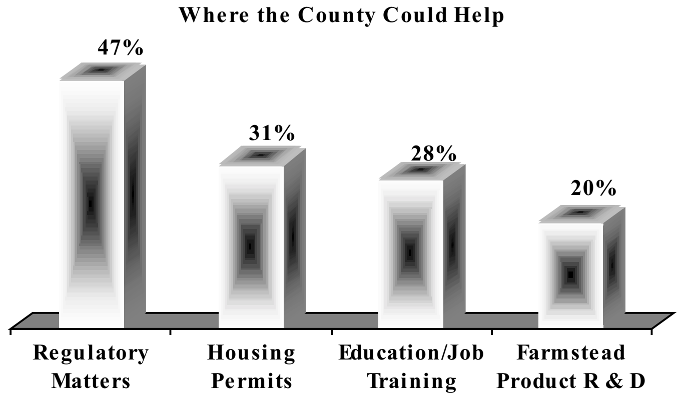
One of the most clear cut issues among survey respondents was the perceived lack of understanding and appreciation of the dairy industry by the local public. **Eighty-one percent of survey respondents felt that local residents did not understand or appreciate the local dairy sector.** When asked what the County could do to increase the understanding of the dairy industry, 36% of respondents offered some form of advice. Respondents advice can be grouped into four basic categories: more public education in regard to the dairy industry (21%), a better portrayal of the dairy industry by the local media (6%), an

To Increase Public Understanding



easing of dairy-related regulations (6%), and a “support” or “buy Sonoma County” approach (3%).

Responding dairies were also asked in what other areas the County could assist the local dairy industry. The four most popular responses among survey respondents were **regulatory matters, housing permits, education/ job training, and farmstead product research and development.**



In terms of **regulatory matters** (it should be noted here that *72% of responding dairies listed environmental laws and regulations as one of the three greatest threats to future dairy industry growth*), dairies contacted to discuss the issue further expressed a desire to see regulatory processes streamlined and expedited, and made easier in any fashion possible. One respondent also noted that local dairies would benefit if the County could absorb some of the increased cost of milk inspections, which have risen in recent years. This respondent also noted that in recent years agricultural exemptions have been abused by residents who use them to build non-agricultural buildings, and that true agricultural users of such exemptions would benefit from stricter enforcement of exemption rules. Unfortunately, one of contacted dairies’ biggest regulatory concerns, water quality regulations and controls, falls under the jurisdiction of a state office, the Water Quality Control Board, as do many other regulations affecting local dairies (the Department of Fish and Game and California Department of Food and Agriculture are other state agencies that play significant role in the regulations that affect local dairies). Because of this, local agencies cannot relieve all of the regulatory frustration felt by local dairies.

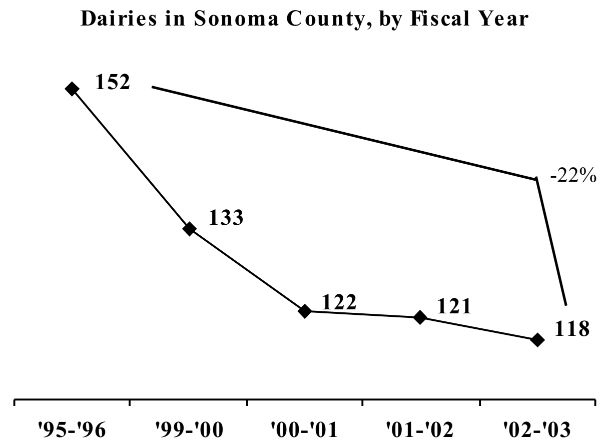
One local dairyman noted regulatory problems in regard to **housing permits** as well, questioning the complexity and amount of paperwork needed to obtain a permit. Other dairies contacted to discuss housing permits either did not respond or did not mention the rigors of the permit process while being interviewed, though one dairy owner did describe why modifications to housing permit regulations would be beneficial to local dairies.
According to this dairy owner, local dairies, based on the amount of pay alone, often cannot offer laborers competitive wages. However, when dairies can also offer their workers housing, the wages they can offer become much more attractive. In this light, changing housing permit regulations to allow local dairies to house more employees would benefit the industry by making it easier for local dairies to attract and retain workers.

In terms of **education/job training**, one respondent and one industry expert that were contacted for follow-up information on the subject noted that due to the large amount of Spanish-only speaking workers in the dairy industry, more translation services for employers and employees would be beneficial, especially in terms of safety and environmental issues. The industry expert noted that such services can already be obtained from various church and school groups within the county.

Farmstead product research and development is an area where the Economic Development Board could aid local dairies by serving as a convener, or organizer, of informational gatherings. As the attached *New York Times* article shows (page 30), Sonoma County’s farmstead cheese is growing in interest. Two respondents contacted in regard to this issue noted that it would be very helpful to have classes or informational meetings on farmstead cheese, since many local dairymen do not know what kind of equipment or marketing are required to produce and sell such cheese, though they are aware of the success such products have had in recent years. A seminar on the subject could likely be organized with the help and collaboration of the California Milk Advisory Board and other interested parties.

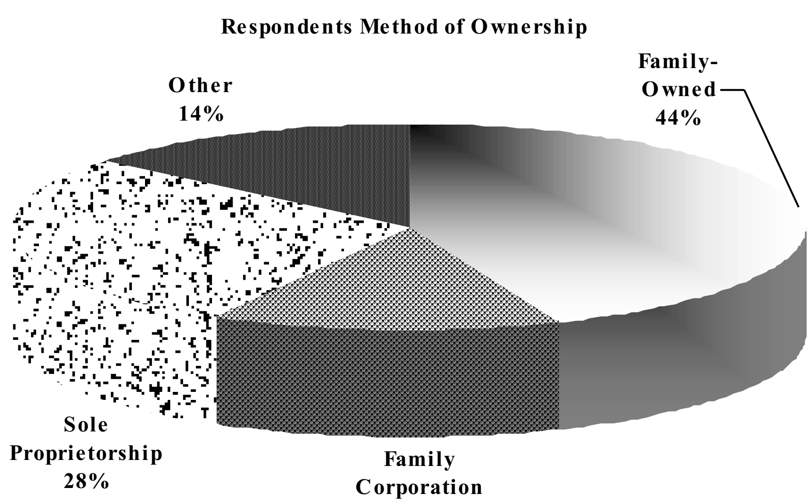
Succession Issues

From fiscal year 1995-1996 through projected fiscal year 2002-2003, the number of local dairies decreased 22%,[5] and survey data suggest that these numbers will continue to fall in the future.



Survey respondents were asked if they planned to sell to a family member or a non-family member when they left the dairy business, and whether they thought these plans would keep their dairy operational. Not surprisingly, those dairy owners that plan to sell to a family member are much more optimistic about their dairy remaining operational after their retirement. Survey data show, however, that cumulatively, between family and non-family succession plans, **only a third of responding dairy owners expect their succession plans to keep their dairy operational after they leave the business.** It should be noted, however, that 19% of survey respondents did not respond to this question.

In addition to dwindling numbers, the family-oriented nature of the dairy industry may also change in the future. Currently, over 85% of responding dairies are either family-owned, family corporations, or sole proprietorships. Among responding dairies however, **only 47% of respondents said their children were interested in continuing in the dairy field,** indicating a possible reduction in the number of family-owned and operated Sonoma County dairies in the future.



Conclusion and Opportunities

In 2001, the Sonoma County Dairy Industry rebounded from a difficult year in 2000. It is still too early to tell however, if this upswing is part of a sustained upward trend or simply a return to relatively normal performance levels. In either case, survey results show that many responding dairies are concerned with the costs of production and profitability, as well as the price of land for expansion, and would like to see greater County assistance in regard to regulations, housing permits, education/job training, and farmstead product research and development. Results also show that most responding dairies do not feel the public understands or appreciates the dairy sector, and survey research reveals that the number of Sonoma County dairies has declined sharply in recent years, and may continue to do so in the future.

Unfortunately, there is little any one local entity can do to assist dairies in regard to increased production costs, high land prices, and most regulatory matters. Additionally, long-term solutions to housing and education issues will take time to develop. Still, local parties could be of relatively quick assistance to local dairies in the following ways:

1. If resources and industry interest permit, **the Economic Development Board (EDB), in cooperation with the Western United Dairymen, Farm Bureau, UC Cooperative Extension, Agricultural Commissioner's Office, and other interested parties, could organize a series of seminars on farmstead, organic, and other value-added products for local dairy producers**. Such seminars could include information on how to produce and market value-added products, as well as how to comply with related regulations. Panelists for such seminars could include representatives from the California Milk Advisory Board, California Polytechnic University San Luis Obispo, University of California at Davis, the California Department of Food and Agriculture, and North Bay producers who have had success with value-added products;

2. In order to attract more positive attention to local dairies, and to benefit the local tourism industry, the EDB, through its tourism program and in conjunction with California Milk Advisory Board, could stage a statewide **Cheese Festival**. Such an event would be a boon to local dairy producers and cheesemakers, and also dovetail well with wine industry tourism to the County;

3. The Sonoma County Workforce Investment Board could work with local dairies to ensure that both dairies and Spanish-speaking workers have the training and **bilingual resources** necessary to communicate and work safely and effectively together;

4. **Agricultural trade groups could also disseminate dairy-related statistics and success stories to the local press**, in this way helping to engender public understanding of the dairy industry;

5. The EDB can explore ways to improve the regulatory situation in cooperation with the various regulatory agencies and the dairy sector;

6. While each initiative warrants further attention, the development of a strategic plan, or "vision," for Sonoma County's dairy industry appears particularly noteworthy. Based on evidence from similar ventures, such as the North Bay Technology Roundtables's "Vision Statement" (www.nbtr.org), the development and implementation of an industry "roadmap" regarding economic statistics and forecasting, collective goals and objectives, or additional marketing efforts could help to foster a collective spirit of collaboration among local dairies. More importantly, perhaps, a comprehensive strategic plan would hopefully bolster Sonoma County's reputation as one of the most well-respected dairy regions in the world, and increase local residents' understanding of the dairy sector.

The EDB stands ready to offer assistance toward fostering this collaboration wherever possible.

Methodology

The Economic Development Board conducted the 2002 Sonoma County Dairy Industry Survey to obtain a general "snapshot" of the Sonoma County dairy industry. 114 surveys were mailed to local dairies and 36 were returned, yielding a relatively high response rate of 32%. From these responses it was possible to discern general trends taking shape within the industry. This report outlines these trends and proposes opportunities toward addressing some of the challenges facing the local dairy industry.

Please note that all data contained in this report is based on the information self-reported by survey respondents, which was not factually verified by the EDB. The responses were then gathered into a database for analysis. Due to the fact that survey respondents may provide no responses to some questions, the category percentages in the graphs for those questions may not sum up to 100%. Where replies are mutually exclusive, percentages may be slightly off due to rounding. When replies are not mutually exclusive, percentages may total more than 100%.

As mentioned above, it was our intention to obtain averages that provide a general "snapshot" of the dairy industry in Sonoma County. Accordingly, the averages have not been weighted by any factor or interest.

This report is designed, as are most such survey reports, to provide a "snapshot in time" of the status of the dairy industry in Sonoma County. The data presented is as accurate as the polling technology permits. The response rate of 32% is reasonably high for a mailed written survey, and all known dairies and dairy processors were included in this survey, so it should measure the major economic activity engendered by this sector accurately. The intent was to give a general set of trendlines to measure economic activity, change, and opportunity, set in a context that most of the surveyed dairies are busy indeed.

Acknowledgements

Many people contributed their time and ideas to this project. Special thanks go to Carol McDowell and John Bucher, who contributed valuable time and information to the report. Keith Neuner and Ralph Sartori were also exceptionally helpful, as was Cree Morgan.

Beyond these individuals, the greatest thanks go to the Sonoma County dairy industry, a substantial portion of which responded to the survey and was kind enough to answer follow-up questions over the phone.

Brandon Schneider did an excellent job compiling the survey data and writing the report.

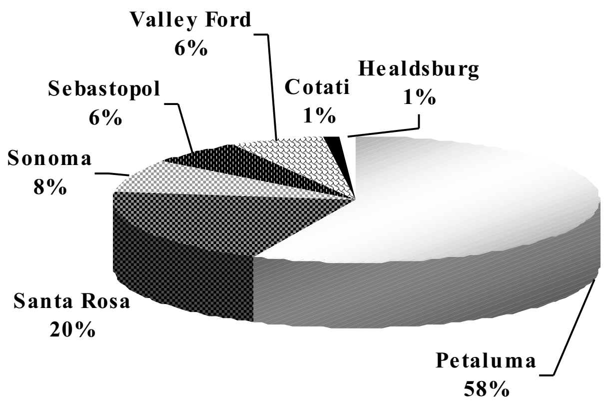
Ben Stone

Appendix

Profile of Respondents

Nearly 60% of responding dairies are located in the Petaluma area. Remaining dairies are widely dispersed across the county:

Where Responding Dairies Are Located

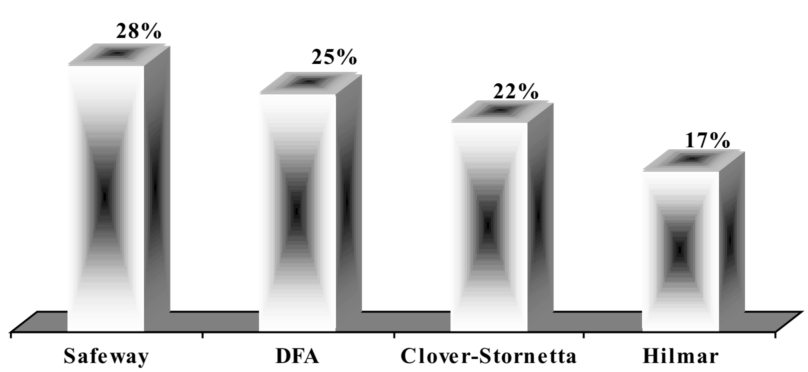


The mean starting date for Sonoma County operations among survey respondents was 1956; the median was 1959. The oldest dairy among respondents began operating in 1905. The newest began in 1998.

The mean number of employees among responding dairies was 6.7; the median was 5.5. The total number of employees among responding dairies was 221. When projected over the entire dairy population of Sonoma County, this number indicates that **local dairies employ roughly 745 people** (this number does not include individuals employed by processors or other dairy related businesses).

Most responding dairies sell their milk to four processors: Clover-Stornetta, Dairy Farmers of America (DFA), Hilmar, and Safeway:

To Whom Responding Dairies Sell Their Milk



2002 SONOMA COUNTY
DAIRY INDUSTRY SURVEY

*(Survey results are reproduced here. Questions appear in **bold**.)*

114 Surveys were mailed. 36 were returned. Response rate=32%

Where are the headquarters of your operation located?

❑Petaluma=54% ❑ Santa Rosa=19% ❑ Sonoma=8% ❑ Sebastopol=6%
❑ Valley Ford=6% ❑ Cotati=1% ❑ Healdsbrg=1%

Year Operation Began in Sonoma County: ❑ 92% responded to this question

❑ Mean=1956 ❑ Median=1958.5 ❑ Earliest=1905 ❑ Latest=1998

Approximate Number of employees in Sonoma County Operations: ❑ 92% responded

❑ Mean=6.7 ❑ Median=5.5 ❑ Total employed by respondents=401
❑ Largest employer=180 (not included in mean and median calculations)
❑ Smallest employer=4 one-man operations

1. **Which of the following area(s) best describe(s) the primary operations of your business in Sonoma County? (Please check all that apply).** 100% responded to this question

❑ Dairy production 94%
❑ Dairy tours 3%
❑ Dairy production/manufacturing 3%
❑ Custom processing 3%

❑ Other (specify): 8% (rehab program, beef and sheep, unspecified)

2. **How would you best classify the form of ownership of your company?** 100% responded to this question

❑ Family owned 44% ❑ Family corp. 14% ❑ Other, please explain: 14% Non-profit foundation, Family LLC, partnership
❑ Sole proprietor 28% ❑ Other corp. 3% (LLC)

3. **What types of dairy products are produced at your dairy? (Please check all that apply)**
100% responded to this question
❑ Milk (raw) 81% ❑ Milk (organic) 6% ❑ Other, please identify: 0%
❑ Milk (hormne free) 42% ❑ Cheese 3%

4. **If any, what other agricultural production occurs on your property (e.g. pumpkins, grapes)**

47% produce other agricultural products. Products produced are:

- ❑ Grapes=35% of those producing other ag. Products/17% of all respondents
- ❑ Hay/Silage=35% of those producing other ag. Products/17% of all respondents

- Beef/Livestock=18% of those producing other ag. Products/ 8% of all respondents
- Other=24% of those producing other ag. Products/ 11% of all respondents

  (Other=organic garden, pumpkins, cheesemaking facility)

5a. What is your milking herd size?

97% responded to this question

- Mean=372
- Mode=200
- Median=325

5b. What is your total herd size?

88% responded to this question

- Mean=590
- Mode=400
- Median=400

6. Are you selling farmstead products?

86% responded to this question

Yes=10% of respondents to this question/ 8% of all respondents

No=90% of respondents to this question/ 78% of all respondents

If yes, where? (please check all that apply, with approx %)

- Snma Cnty=1 resp.=100%
- California (______ %)
- Outside CA (______%)

7. To whom are you selling your bulk raw milk (Please check all that apply)?

92% responded to this question

- **Hilmar**=18% of respondents to this question/17% of all respondents
- **DFA**=27% of respondents to this question/25% of all respondents
- **Clover**=24% of respondents to this question/22% of all respondents
- **Safeway**=30% of respondents to this question/28% of all respondents
- **C.D.I.=**0
- **Other (please identify____________)**=0

8a. What type of milk premium(s) are you receiving

83% responded to this question

- Quality=73% of respondents to this question/61% of all respondents
- Protein=37% of respondents to this question/31% of all respondents
- Other (organic/hormone free/AHA program/bacteria counts/scc/sediment/ranch appearance/competitive allowance/nce/profit share/cheese yield)=47% of respondents to this question/39% of all respondents

8b. What amount ($) are you receiving for this/these premium(s)?

50% of all respondents provided responses in $/cwt.

- Mean=.28/cwt (hundred-weight)
- Median=.23/cwt
- Mode=.45/cwt

8. What price per cwt. is considered essential to remain viable in Sonoma County?

72% responded to this question

- Mean=$13.90
- Median=$14.00
- Mode=$15.00

9. Do you anticipate a rise in raw materials (e.g., feed) prices over the next three years?

86% responded to this question

- **Yes**=90% of respondents to this question/78% of all respondents
- **No**=10% of respondents to this question/8% of all respondents

If yes, by what percentage?

- Mean=15%
- Mode=10%
- Median=10%

11. How important will it be for Sonoma County producers to receive value-added pricing (i.e. higher prices for non-traditional products such as rBST free milk) for their milk in order to compete with larger producers?

100% responded to this question

- **Very**=67% of all respondents
- **Somewhat**=25% of all respondents

- **Not at all**=8% of all respondents

12. Would you change aspects of your operation to receive a value-added price for your milk?

78% responded to this question

- **Yes**=71% of respondents to this question/56% of all respondents
- **No**=29% of respondents to this question/22% of all respondents

13. Does Sonoma County provide a sufficient pool of *unskilled labor* for your employment needs?

92% responded to this question

- **Yes**=79% of respondents to this question/72% of all respondents
- **No**=21% of respondents to this question/19% of all respondents

14. How difficult is it for your operation to find *unskilled labor*?
92% responded to this question

- **Very difficult**=12% of respondents to this question/11% of all respondents
- **Difficult** =15% of respondents to this question/14% of all respondents
- **Somewhat difficult** =42% of respondents to this question/39% of all respondents
- **Not really a problem**=30% of respondents to this question/28% of all respondents

Why? "not many people want to work a split shift on a dairy farm", "expensive cost of living", "they leave one dairy to go to another", "(difficult) not too many want to do this kind of work anymore", "(somewhat difficult) skill level", "(somewhat difficult) wages and job conditions", "(somewhat difficult) seasonal", "(not really a problem) my good employees usually locate labor for me", "(somewhat difficult) better this year than last, but must provide housing, working in other industries", "want to hire legal employees-hispanics usually legal-others don't want to do the work", "language", "lot of mexicans looking for work"

15. Does Sonoma County provide a sufficient pool of *skilled labor* (e.g., office, financial, etc.) for your employment needs?

86% responded to this question

- **Yes**=61% of respondents to this question/ 53% of all respondents
- **No**=39% of respondents to this question/ 33% of all respondents

16. How difficult is it for your operation to find *skilled labor*?
97% responded to this question

- **Very difficult**=9% of respondents to this question/8% of all respondents
- **Difficult**=29% of respondents to this question/28% of all respondents
- **Somewhat difficult** =23% of respondents to this question/22% of all respondents
- **Not really a problem**=40% of respondents to this question/39% of all respondents

Why? "employees not trained properly", "(not really a problem)I teach them what I want them to do", "cost", "(somewhat a problem) virtually no one except immigrant hispanics available", "(somewhat difficult) seasonal", "(difficult) herd sizes not large enough to support hiring outside management", "being in ag it is harder to pay as high of wages" "(no problem) used same ones for years", "don't get paid enough for our milk to hire help"

17. Do you plan to hire more *skilled* employees over the next year?
(If "yes," please check all that apply)
94% responded to this question

- ❑ **Yes**=24% of respondents to this question/22% of all respondents
- ❑ **No**=76% of respondents to this question/72% of all respondents

❑ **Production**=57% of those that responded to this segment of Question 17/50% of those that responded to the yes/no part of Question 17/11% of all respondents (there were 4 respondents)
❑ **Management**=29% of those that responded to this segment of Question 17/25% of those that responded to the yes/no part of Question 17/ 6% of all respondents (there were 2 respondents)
❑ **Other=**14% of all those that responded to this segment of Question 17/13% of those that re-sponded to the yes/no part of Question 17/3% of all respondents (there was one respondent)

18. What is/are your primary source(s) of capital?
92% responded to this question

- ❑ **Private**=27% of respondents to this question/25% of all respondents
- ❑ **Operating Capital**=39% of respondents to this question/36% of all
- ❑ **Bank Financing**=45% of respondents to this question/42% of all respondents
- ❑ **Other** =0

19. Is capital access in Sonoma County a major problem for your business?
86% responded to this question

- ❑ **Yes**=26% of respondents to this question/22% of all respondents
- ❑ **No**=74% of respondents to this question/64% of all respondents

Why?"it's an agricultural based community", "(y) banks won't lend if farm prices are low", "when was the last new dairy built? In the 70's", "(n) I use no outside sources for my business", "(y) not much ag banking", "people don't understand the dairy business"

20. Did you expand your facilities, dairy production, or total acreage during the last year? (Please check all that apply).

56% responded to this question

❑ **Facilities** 45% of respondents to this question/25% of all respondents
❑ **Acreage** 20% of respondents to this question/11% of all respondents
❑ **Dairy Production (same herd size)** 65% of respondents to this question/36% of all respondents
❑ **Increased herd size** 30% of respondents to this question/17% of all respondents
❑ **Other** 5% of respondents to this question/3% of all respondents (this was 1 respondent, who stated "internal growth"

If yes, why did you expand (Please check all that apply)?

- ❑ **Higher milk price**=20% of respondents to this question/11% of all respondents
- ❑ **Increased production capacity**=20% of respondents to this question/11% of all respondents
- ❑ **Diversification to other crops**=10% of respondents to this question/6% of all respondents
- ❑ **Expectations of increased future demand**=10% of respondents to this question/6% of all

respondents

- **Other**=25% of respondents to this question/ 14% of all respondents (1-waster water compliance, 1-waste storage, 1-economies of scale, 1-building out to match acreage available, 1-brought facilities to 100%

If yes, how did you finance your expansion?

- **Bank Financing** =25% of respondents to this question/14% of all respondents

- **Private=**35% of respondents to this question/19% of all respondents

- **Other**=15% of respondents to this question/8% of all respondents (1-city loan, 1-cash flow, 1-natural growth)

21. Do you plan to expand your dairy production in the upcoming year?
94% responded to this question

- **Yes**=18% of respondents to this question/17% of all respondents
- **No**=82% of respondents to this question/78% of all respondents

22. What are the greatest challenges facing the local dairy industry with regards to growth?
(Please rank top three, 1= Greatest challenge; 2= Second greatest; 3= Third greatest)
89% responded to this question

Environmental laws/ regulations
- Ranked in top 3=81% of respondents to this question/72% of all respondents
- Ranked 1=53% of respondents to this question/47% of all respondents
- Ranked 2=22% of respondents to this question/19% of all respondents
- Ranked 3=6% of respondents to this question/6% of all respondents

Water availability/rights
- Ranked in top 3 =9%of respondents to this question/8% of all respondents
- Ranked 1=3% of respondents to this question/3% of all respondents
- Ranked 2 =6% of respondents to this question/6% of all respondents
- Ranked 3= 0

Adequate Capital/Financing
- Ranked in top 3=3% of respondents to this question/3% of all respondents
- Ranked 1=3% of respondents to this question/3% of all respondents
- Ranked 2=0
- Ranked 3=0

Disease prevention
- Not ranked 1,2, or 3 by any respondent

Available acreage
- Ranked in top 3 = 9% of respondents to this question/8% of all respondents
- Ranked 1 =0
- Ranked 2 =9% of respondents to this question/8% of all respondents
- Ranked 3 =0

- Ranked in top 3=19% of respondents to this question/17% of all respondents
- Ranked 1 =0
- Ranked 2 =9% of respondents to this question/8% of all respondents
- Ranked 3 =9% of respondents to this question/ 8% of all

Price of land for expansion

- Ranked in top 3 =47% of respondents to this question/42% of all respondents
- Ranked 1 =16% of respondents to this question/14% of all respondents
- Ranked 2 =22% of respondents to this question/19% of all respondents
- Ranked 3 =9% of respondents to this question/8% of all respondents

Labor availability
- Ranked in top 3 =13% of respondents to this question/11% of all respondents
- Ranked 1 =0
- Ranked 2 =6% of respondents to this question/6% of all respondents
- Ranked 3 =6% of respondents to this question/6% of all respondents

Long range vision for dairies here
- Ranked in top 3 =38% of respondents to this question/33% of all respondents
- Ranked 1 =6% of respondents to this question/6% of all respondents
- Ranked 2 =13% of respondents to this question/11% of all respondents
- Ranked 3 =16% of respondents to this question/14% of all respondents

Other
- Not ranked 1, 2, or 3 by any respondent

Family estate succession issues
- Ranked in top 3 =13% of respondents to this question/11% of all respondents
- Ranked 1 =3% of respondents to this question/3% of all respondents
- Ranked 2 =0
- Ranked 3 =9% of respondents to this question/8% of all respondents

Higher cost of production/profitability

- Ranked in top 3 =28% of respondents to this question/25% of all respondents
- Ranked 1 =9% of respondents to this question/8% of all
- Ranked 2 =0
- Ranked 3 =19% respondents to this question/17% of all respondents

Urban encroachment
- Ranked in top 3 =16% of respondents to this question/14% of all respondents
- Ranked 1 = 0
- Ranked 2 = 9% of respondents to this question/8% of all respondents
- Ranked 3 = 6% of respondents to this question/6% of all respondents

Distribution barriers
- Not ranked 1, 2, or 3 by any respondent

Housing

- Ranked in top 3 =6% of respondents of this question/6% of all respondents
- Ranked 1 =0
- Ranked 2 =3% of respondents to this question/3% of all respondents
- Ranked 3 =3% of respondents to this question/3% of all respondents

Foreign competition

- Not ranked 1,2, or 3 by any respondent

Competition from larger Central Valley dairies

- Ranked in top 3 =19% of respondents to this question/17% of all respondents
- Ranked 1 =0
- Ranked 2 =13% of respondents to this question/11% of all respondents
- Ranked 3 =6% of respondents to this question/6% of all respondents

23. Would a shortage of water slow expected vitality of your operation?

89% responded to this question

- **Yes**=75% of respondents to this question/67% of all respondents
- **No=**25% of respondents to this question/22% of all respondents

24. Do you plan to sell your operation in the future?

89% responded to this question

- **Yes**=38% of respondents to this question/33% of all respondents
- **No =**63% of respondents to this question/56% of all respondents

If yes, when?

- **1-3 years** =25% of respondents who answered "yes" to the first part of Question 24/9% of any respondents to Question 24/8% of all survey respondents
- **4-7 years =**33% of respondents who answered "yes" to the first part of Question 24/13% of any respondents to Question 24/11% of all survey respondents
- **8-10 years** =0
- **More than 10 years** =33% of respondents who answered "yes" to the first part of Question 24/ 13% of any respondents to Question 24/11% of all survey respondents

25. What are your business succession plans when you retire?

81% responded to this question

- **Sell** =41% of respondents to this question/33% of all respondents
- **Sell to Family**=59% of respondents to this question/ 47% of all respondents

25a. Do you anticipate that these plans will keep your dairy operational?

- **Yes**=63% of respondents to Question 25a/53% of all respondents
- **No**=37% of respondents to Question 25a/31% of all respondents

Note: 14%of those "selling (not to family)" expected such plans to keep their dairy operational
67% of those "selling to family" expected such plans to keep their dairy operational

26. If you are planning to sell, would you consider starting a dairy operation elsewhere?

81% responded to this question

- **Yes**=21% of respondents to this question/17% of all respondents
- **No**=79% of respondents to this question/64% of all respondents

Why? "y-newer facilities", "n-I like it here; I'm 54 now", "n-prefer farming grapes", "n-I like it here!", "y-impossible to get permits (in reasonable fashion/time)", "n-age", "n-capital required would be unreasonably high", "y-available land, affordable labor, feed, construction, land", "y-find an ag friendly county", "n-need change, profitability, retirement", "n-want to enjoy life in Sonoma County", "n-age", "y-ability to expand", "lower feed costs", "n-environmental laws-family estate-price of land"

If yes, where? "Central Valley", "Valley", "Northern California", "Northern California-Tehamia County(?)", "Northern Sac Valley"

27. Are your children interested in continuing in the dairy field?

78% responded to this question

- **Yes**=61% of respondents to this question/ 47% of all respondents
- **No**=39% of respondents to this question/31% of all respondents

28. Do you think the local residents understand and appreciate the dairy sector and its concerns?

97% responded to this question

- **Yes** =17% of respondents to this question/17% of all respondents
- **No**=83% of respondents to this question/81% of all respondents

Why? "n-not educated", "y-most neighbors are accomodating", "n-people in town have no clue about us", "n-lack of info", "n-complain about odor", "n-pollution problems", "n-most don't have a clue to what we do to put a gallon milk in the store", "n-no understanding of agriculture", "n-bad press, lack of knowledge and facts", "y-somewhat lack of exposure to what the needs of agriculture are", "n-the public lacks in-depth understanding", "n-urban and rural are too different[do not understand day to day challenges of the industry not important enough to affect their lives" , "long time residents yes, new residents no", "open space, carpet baggers", "Sonoma County becoming more urban, need more education", "n-don't understand daily/seasonal difficulties in labor, weather, conditions, costs of production, etc, etc"

If not, what could the County do to help increase the understanding of the dairy sector?

"Show how much dairy contributes to local economy", "portray industry more accurately, still portrayed as small", "education", "promote local production, Sonoma County grown, etc", "relax many of the environmental and general plan restrictions" "support buy Sonoma County approach", "change mindset that farmers=criminals", "better knowledge of the dairy industry and how we do what we do", "enforce right to farm ordinance already in place", "promote hand-on experience-particularly for people who would have the greatest impact on political decisions", "news media-poor coverage, report only bad, not good", "tell people where food and open space come from, farmers", "education-all ag needs to do is to teach people how their food is produced"

29. In which areas do you feel local government could help to further assist the dairy industry?
75% responded to this question

- **Education/job training**=37% of respondents to this question/28% of all respondents
- **Regulatory (licensing/permits)**=63% of respondents to this question/47% of all respondents
- **High speed Internet access**=0
- **Farmstead product research and development**=26% of respondents to this question/19% of all respondents
- **Housing permits**=41% of respondents to this question/31% of all respondents
- **Promoting tourism**=11% of respondents to this question/8% of all respondents
- **Others** =15% of respondents to this question/11% of all (1-stable pricing, 1-encourage develop ment of national waste/pollution standards, 1-ease up on environmental regulation and give us a $15.00 floor for our milk, 1-no licensing and permits

Why? "permits-it's expensive to build farms and residential buildings", "less regulations more education", "small businesses can't meet regulatory requirements without time and money", "piecemeal approach (re waste pollution policies) used now is not working and varies too much between regions. Also want to eliminate all federal price supports", "permits-lower fees, or make fee good for longer time periods, and less paper work"

30. Are infectious diseases/bio-security issues a concern for your dairy?

100% responded to this question

- **Yes**=64% of respondents to this question/64% of all respondents
- **No**=36% of respondents to this question/36% of all respondents

31. Are dairy product imports a threat to your operation's success?

94% responded to this question

- **Yes**=74% of respondents to this question/69% of all respondents
- **No**=26% of respondents to this question/25% of all respondents

If yes, from what region(s) do threatening imports come?

- <u>New Zealand</u>=60% of those that designated a specific region/ 36% of those that responded "yes" to Question 31/ 25% of all survey respondents
- <u>Europe</u>=27% of those that designated a specific region/16% of those that responded "yes" to Question 31/ 11% of all survey respondents
- <u>Australia</u>=20% of those that designated a specific region/12% of those that responded "yes" to Question 31/8% of all survey respondents
- <u>Other(Argentina, NAFTA)</u>=13% of those that designated a specific region/8% of those that responded "yes" to Question 31/6% of all survey respondents

**If yes, what specific products that you produce are threatened by imports (i.e. cheese, raw milk,
etc)?**

- <u>Cheese</u>=43% of those that designated specific products/24% of those that responded "yes" to Question 31/17% of all survey respondents
- <u>Protein Concentrate</u>=29% of those that designated specific products/16% of those that re-sponded "yes" to Question 31/11% of all survey respondents
- <u>Other(raw milk, butter, non-fat dry milk)</u>=36% of those that designated specific products/20%

of those that responded “yes” to Question 31/14% of all survey respondents

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32. Other Comments/Concerns/Suggestions (Please attach a separate sheet if necessary)

“Make Sonoma County dairy like Sonoma County wine industry-distinct, high quality, etc”, “if dairy permits have to go through strict process like the mushrooms relocating dairy will vanish”, “whoever put this survey together did a great job! Thanks Ben!”, “Sonoma County had 3 advantages in dairy: 1) location close to markets; 2)climate; 3) pasture. High land prices and new housing systems have eliminated #2 #3”, “People and cows don’t mix. More houses and people coming to Sonoma County. Less dairies. Dairies will move to less populated areas”, Population doubling and glass bottle milk decreasing. Big business is playing games with small family businesses””, “No imports”

Resources

1. Sonoma County. Agricultural Commissioner's Office. Sonoma County Agricultural Crop Reports, 1990-2000.

   California. California Department of Food and Agriculture. 2001 California Dairy Statistics Annual. www.cdfa.ca.gov/dairy/pubs/Annual/2001/index.htm.

2. California. California Department of Food and Agriculture. 1993-1998 California Cost of Production Index. www.cdfa.ca.gov/dairy/sp105.intro.htm

3. California. California Department of Food and Agriculture. 1998 California Cost of Production Index. www.cdfa.ca.gov/dairy/sp/sp105_98.htm.

4. California. California Department of Food and Agriculture. 2001 California Dairy Statistics Annual. www.cdfa.ca.gov/dairy/pubs/Annual/2001/index.htm

5. Sonoma County. Department of Health Services, Environmental Health Division.

This article orginally appeared as a full-page, color-photograph piece in the New York Times. It highlights some local producers that have been very successful producing farmstead cheese.

November 28, 2001, Wednesday

DINING IN, DINING OUT/STYLE DESK

A New Normandy, North of the Golden Gate

By R. W. APPLE Jr. (NYT) 2972 words

VALLEY FORD, Calif. — CAN this be the place? Dubiously, you drive up a muddy, unmarked road potted with water-filled holes, park next to a worn army-surplus generator, poke your head into a metal farm building and peer down a corridor.

At the far end stands a pink-cheeked woman with short-cropped gray hair topped by a fluorescent lime-green baseball cap energetically stirring the contents of a stainless-steel tank with a wooden paddle. This, it turns out, is Cindy Callahan, Sarah Lawrence alumna, nurse, graduate of the University of California's exacting Hastings law school, mother, cheese maker.

With her husband, Ed, a doctor, who died several years ago, Mrs. Callahan forsook the pleasures of cosmopolitan San Francisco in 1986 to begin raising sheep in southwestern Sonoma County. This is not the Sonoma of obsessively tended vines and chic shops. Here vast pastures roll rhythmically into the distance, punctuated by rough granite outcrops and enormous eucalyptus trees. In the mist of a late November morning, the dark bulks of Angus cattle loom large on the hillsides; small, vulnerable-looking sheep huddle in the foreground.

Now 66, Mrs. Callahan runs Bellwether Farms with her two sons, Liam, 35, and Brett, 32. They produce handmade goat's- and cow's-milk cheeses of rare excellence, including a firm, sweet, slightly caramel-flavored ricotta. It bears no resemblance to the wan, wimpy stuff that Americans are accustomed to. Thomas Keller of the French Laundry in the Napa Valley, who uses it in ravioli, describes it as the best he has ever tasted in the United States.

Amazingly, this profoundly rural area, much of it beyond the reach of cellphones, lies only 50 miles or so north of the Golden Gate. More amazingly, it has evolved in recent years into one of the nation's prime centers of artisanal cheese making, a New World counterpart to Lombardy and Normandy. At many of the best dairies, as at Bellwether Farms, women play leading roles, like their Old World sisters.

Up the road, near Sebastopol, Jennifer Bice (rhymes with ''dice'') owns Redwood Hill Farm, a producer of goat's milk yogurt and cheeses sold nationally in Whole Foods markets, among others. Down south, near Point Reyes in Marin County, where the landscape looks less like Wales and more like Scotland, three Giacomini sisters oversee the making of California's first blue cheese, and Sue Conley and Peggy Smith, the head cowgirls at Cowgirl Creamery, turn Ellen Straus's gorgeous organic cow's milk into all manner of delights.

My wife, Betsey, and I had tasted one or two of these cheeses in the East, but it was only last summer that we learned just how much we had been missing. Toward the end of an excellent dinner at Gary Danko, one of the premier restaurants in San Francisco, I did what I have done hundreds of times in England and France and Italy: I asked to taste some local cheeses.

Lynn Andrews, the resident cheese expert, who matures some of the cheeses she sells in an in-house cooler, did not let us down. She brought out eight of them and, Scheherazade-like, spun an intriguing tale about each of them in her soft voice.

We tasted. We talked. We surrendered. No inner voice whispered ''yes, but.'' We felt no longing whatsoever for the great cheeses of far-off Europe.

California is the nation's largest dairy state and its second-largest cheese producer; some expect it to take the lead from Wisconsin by 2005. Cheese is made all over the state, even near Los Angeles, in Winchester, where the Netherlands-born Jules Wesselink and his daughter, Valerie Thomas, produce a granular aged Gouda whose hauntingly nutty, salty flavor dazzled Mr. Keller and his cheese manager, Lachlan Patterson, when I

took a big chunk by for them to taste.
We were much intrigued, after our tasting session at Danko, by the involvement of so many women in Marin and Sonoma cheese making. Traditionally, men herd the sheep, goats and cows on the European continent, while their wives make cheese. In England, Mrs. Kirkham, Mrs. Montgomery and Mrs. Appleby — they are known by their family names alone — have helped to keep the tradition of farmhouse cheese alive.
The same pattern seems slowly to be developing in the United States, through the efforts of women like Sally Jackson, who makes cheeses of unusual complexity in Washington State, near the Canadian border; Paula Lambert, who makes a broad range of Italianate cheeses in Dallas; Dr. Patricia Elliott, a physician in Rapidan, Va., near Charlottesville, who specializes in hard sheep's milk cheese; Mary Keehn, who makes the unparalleled Humboldt Fog in far northern California; and, of course, Laura Chenel, whose Sonoma County goat cheese began the California boom in the 1970's. She has been so successful that her cheese is now made by machine, not by hand.

A Tangy Wedge
Bellwether Farms deals in meat as well as cheese, selling spring lambs, less than six weeks old, to San Francisco restaurants like Masa's and Rubicon. The dressed carcasses weigh only 20 pounds, a bit more than the baby lamb, or abbacchio, that forms the centerpiece of Easter feasts in Rome.
Lambs are born here in late winter or very early spring and weaned 35 to 40 days after birth. Only after they go to market do the Callahans begin to milk the ewes in their flock of East Friesian sheep, continuing until October. When no sheep's milk is available, they buy cow's milk from a neighboring farmer, but the sheep cheeses have made Bellwether's reputation.
All are grounded in the lessons Ed and Cindy Callahan learned at farms in Tuscany and Umbria when they visited Italy early in their cheese-making careers. Liam Callahan's favorite among them, and mine, is San Andreas, which is named after the earthquake fault line that passes near the farm. It is made from unheated milk and shaped into fat wheels that weigh about four and a half pounds when they are fresh.
After two to four months on pine slats in an aging room, where the temperature is held at a constant 50 degrees, they are down to three pounds. In the process, the cheeses lose moisture and develop surface mold. When mature, they are firm in texture, with a clean, mild flavor and a tangy finish; you can taste the full flavor of the Friesian milk in the finished product. Though softer than pecorino, they have a similar bite.
Bellwether makes a Tuscan-style cheese studded with peppercorns, called Pepato, and a cow's milk version of San Andreas called Carmody, after a nearby road, as well as impossibly unctuous crème fraîche.
The prize-winning ricotta is a byproduct of San Andreas and Carmody. Once the curds have been separated from the whey and poured into molds, the whey is pumped into another vat, topped up with whole milk and heated rapidly, to 180 degrees for sheep's milk, 192 for cow's milk. When vinegar is poured into the tank, soft curds form in less than two minutes.
This is tough, repetitive physical labor, from which there is no shirking. Liam Callahan said with a sigh of resignation, ''It sure gets you into a rhythm.''
But the rural life has never lost its allure for his mother.
''We had a professor at Sarah Lawrence named Joseph Campbell,'' she said. ''He was a famous guy, a philosopher. He used to tell us, 'Follow your bliss.' Well, I'd say it's pretty blissful out here.''

Crottins From Sebastopol
Jennifer Bice, a gentle but determined woman, sometimes wears a silver goat pin on the lapel of her sweater. She dotes on the 400 goats she keeps at Redwood Hill, giving each a name. She breeds Alpines and Nubians, LaManchas, Saanens and Toggenburgs — the five major types of dairy goats in the United States. And she serves regularly as a judge at major goat shows.
Her parents started the dairy, located among towering trees just south of the Russian River, in 1968, and young Ms. Bice worked with the goats as 4-H projects. She and her husband, Steven Shack, took it over in 1978 and built it into one of the best of its kind in the country, producing cheeses of remarkable delicacy with traditional methods. Mr. Shack died of cancer in 1999.
Ms. Bice said that she found it difficult to attract American workers to the area because of the high cost of living. So much of the work at Redwood Hill is carried out by foreigners, recruited at agricultural colleges

abroad and brought here on special 18-month work visas. At the moment, she has several Bulgarians, a Danish woman and a young Tanzanian on the payroll.

The goats, fed on hay and grains, are milked twice every day, at 6 a.m. and 5:30 p.m. Their milk is cooled from 103 degrees to 38 degrees in five to seven minutes to retard the development of bacteria, then pasteurized. A starter culture is added to form a soft curd, a process that takes much longer than using rennet, a substance taken from animals' stomachs. The cheese takes 16 to 18 hours to coagulate and two days to drain; with rennet it takes no more than 24 hours. The advantage is a smoother and more delicate texture.

''Can't make good cheese from bad ingredients,'' Ms. Bice admonished me as she showed me around her tiny ''factory'' — actually, one big room where the cheese is made and packaged, with a minilaboratory tucked into a corner. The cheeses are matured in a pair of adjacent rooms where they are first dried and then aged, the delectably edgy Camembert-style Camellia for as much as four weeks.

Of the 30,000 pounds of cheese Redwood Hill makes every year, one of the most successful styles is called California Crottin, in homage to the white disks so popular in France. With a pale yellow rind and a robust, earthy taste, it is an ounce and a half of pure joy. But unlike the French, who offer crottin in fresh, medium and mature versions, Ms. Bice sells it only fresh.

A lover of goat cheese when it is old and chalky, I asked why.

''When we started, we sold a well-aged crottin,'' Ms. Bice said, ''but people complained. Americans want it fresh, so that's what we give them.''

A Rich Original Blue

Redwood Hill stands on a hilltop just above Iron Horse Vineyards, and my friend Joy Sterling, a member of the family that owns the winery, jokes that Ms. Bice's cheeses taste so good ''because her goats spend their whole lives looking at my vines.'' Maybe she's on to something there. Maybe visually soothed animals give sweeter-tasting milk. Certainly Bob Giacomini's herd of Holstein cows, from whose milk his family produces Point Reyes Original Blue, the hottest new handmade California cheese in many years, have a view to die for.

''Brigadoon,'' Betsey said when she saw the landscape. Its verdant moors, punctuated here and there with yellow gorse, slope down to firthlike Tomales Bay, and on most mornings horizontal stripes of low-lying fog cling to the hillsides beyond. No wonder there are villages and roads with names like Argyll and Aberdeen and Inverness.

Mr. Giacomini has run a dairy in the area since 1959, but the cheese has been on the market only since January. It came into being because he wanted to reduce the size of his 500-head herd, whose manure was threatening to pollute the oyster beds in the bay, without reducing his income. And because he wanted to lure at least some of his four accomplished daughters back home.

Three of them, all with business degrees, are here now: Karen Giacomini Howard, 41; Lynn Giacomini Stray, 35; and Jill Giacomini Basch, 31. They work with Monte McIntyre, the cheese maker, who was born on a dairy farm in South Dakota and perfected his craft making Maytag, which many experts consider the nation's finest blue cheese, in Newton, Iowa.

''We've always been a family of foodies anyway,'' Ms. Basch said.

The succulent new cheese has caught on quickly, gaining a place in stores across the country (including Murray's Cheese Shop in New York) and restaurants all over California (at Miramonte, the comfort-food genius Cindy Pawlcyn's sparkling new place in St. Helena, it appears on the Super Supper Burger). The only question is whether it can build a sufficiently large following to justify the Giacominis' investment.

Two 1,500-gallon vats give their shiny new plant a capacity of 250,000 pounds a year; they are producing 15 percent of that, making cheese only a day or two a week.

The milk is not pasteurized, but it is homogenized, which breaks up fat globules and encourages the formation of holes in the curd, so air can penetrate to the interior and help mold to grow. (Later, more are mechanically punched into the cheese.) A liquid mold, penicillium roquefortii, is added to the milk, along with rennet, and the resulting curd goes into round forms. After draining overnight, the nascent cheeses are taken into a cold, humid room — ''a kind of artificial cave, since we don't have real ones here,'' Mr. McIntyre explained — where they are sprinkled once a day for three days with kosher salt.

Encased in Cryovac bags, the cheeses age for six to eight months. It is this technique, I suspect, that makes them so much moister than Stilton. They are less pungent than Roquefort because they are made with cow's milk, not sheep's milk. Their remarkable richness, reminiscent of Gorgonzola, is a family secret, at least for now.

A Cowgirl's Sweet Dream

Cowgirl Creamery is something different, a glass-enclosed room inside Tomales Bay Foods, a hangarlike store in the hamlet of Point Reyes Station (population 350). It was started five years ago by Ms. Smith, 48, a former co-chef at Chez Panisse Cafe in Berkeley, and Ms. Conley, 49, who developed what must be the creamery's greatest treasure — a rich, creamy, subtly tart, triumphantly cheesy cottage cheese that puts soupy commercial rivals to shame.

The store sells oils, wines, prepared food to go and cheeses made by others, in the United States and abroad, whom the cowgirls admire. It is where I first tasted Mr. Wesselink's and Dr. Elliott's cheeses, and it stocks the wonderful English cheeses from Neal's Yard in London. (One of the cowgirls, Kate Arding, who manages the cheese counter, used to work there.)

But the main feature is the Cowgirl cheeses, made from the phenomenally rich, thick Straus milk, which comes from a single herd of Holsteins, the first herd of any breed west of the Mississippi to be certified organic. They graze along Tomales Bay near Marshall, about 10 miles north of Point Reyes Station.

''It's the milk that makes the difference,'' said Ms. Smith, an earnest, engaging woman with steel-gray streaks in her dark hair. ''The herd has an individual character. You can taste the changes of the grasses and the seasons in the milk.''

Straus milk is an unlikely byproduct of Nazi persecution of the Jews in Europe. Ellen Straus, born in the Netherlands, and her husband, Bill, born in Germany, are both refugees, who met in the United States. Their son, Albert, helps run the family farm.

In addition to cottage cheese, Cowgirl makes fromage blanc, crème fraîche and mascarpone — all velvety, all delicious, all tantalizingly unavailable outside the Bay Area. They need to be eaten quickly, Ms. Conley said, preferably within three days, so they are not well adapted to shipping.

But the creamery's soft-ripened cheeses can be ordered by mail, and they are every bit as beguiling. The triple-cream Mt. Tam (after Mount Tamalpais, just down the coast) is available all year long; buttery yet not cloying, it has an earthy flavor reminiscent of mushrooms. Three others are available seasonally — St. Pat, wrapped in nettle leaves, in the spring; Pierce Point, washed in Quady Essencia, a muscat-based sweet wine, and rolled in dried herbs, in the fall; and my pick of the litter, Red Hawk, a more pungent washed-rind triple-cream, ideal for winter, best when aged for six weeks.

Oh, yes, the name. When Ms. Smith and Ms. Conley were setting up shop, Mrs. Straus said to them, ''Remember, girls, this is the Wild West.''

Farm to Home, The Easy Way

Most of the cheeses in this article can be bought at cheese shops and specialty food stores around the country for about $13 to $24 a pound. All are available at Artisan Cheese, 2413 California Street, San Francisco, (415) 929-8610, and in New York at Murray's Cheese Shop, 257 Bleecker Street, (212) 243-3289.

For mail-order inquiries:

BELLWETHER FARMS — Valley Ford, Calif., www.bellwethercheese.com, (707) 763-0993.
REDWOOD HILL FARM — Sebastopol, Calif., www.redwoodhill.com, (707) 823-8250.
POINT REYES FARMSTEAD CHEESE COMPANY — (for Original Blue), Point Reyes Station, Calif., (415) 663-8880, www.pointreyescheese.com.
COWGIRL CREAMERY — Point Reyes Station, Calif., www.cowgirlcreamery .com, (415) 663-9335.