Fernjo Farms Case Study

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By: Michelle Cheda, Luis Trujillo, Lauren Ott, and Andrew Lucchesi
Fernjo Farms

Michelle Cheda, Luis Trujillo, Lauren Ott, and Andrew Lucchesi prepared this case under the supervision of Dr. Wayne Howard in AGB 462 Applied Agribusiness Problems as the basis for class discussion rather than to illustrate either effective or ineffective management.

Family Dairy History

During the late 1800’s great grandfather, Joseph Fernandes accidentally traveled from the Azores Islands as a stowaway on a ship during the war in Engloa. Upon landing in the United States, he traveled across the country to California in a cattle trailer with one milk cow, stopping along the way for the cow to graze on grass patches and to sell the small amount of milk for profit. It was from this trailer that Joe was born. Joseph, like many other portuguese immigrants, struggled to gain equal opportunity to own land. The majority of his life in California was dedicated to working on a dairy farm in Tulare. The owner of the dairy had no sons to take on the family business, ultimately allowing him to slowly buy out the owner towards the end of his lifetime. Unfortunately, Joseph had passed away before he was able to make a sizable worth of money and the dairy was later sold.

Joe decided to follow in his father Joseph’s footsteps and rented, and eventually owned an old dairy facility built in the 1920’s. This original building is where Fernjo Farms essentially all began and is still a working facility of the farm today. Joe, father of nine children, is responsible for the start of Fernjo Farms corporation and was the main owner of the business up until his recent passing in which he handed the business down to his sons.

Joey Fernandes

California Dairyman and Familyman

After graduating with a degree from Cal Poly, the eldest son, Joey, returned to the family dairy in Tulare. Frustrated with the thought of waiting 16 years for all of the brothers to be able to contribute to the business, Joey made the hardest decision of his
life and split from the family partnership in 1998. Although Joey knew his decision was made for the better, his choice generated frustration as he watched his younger brother’s dairy operations transform to become much larger and more efficient than his own, abelling them to pull together more capital for investment opportunities.

Despite talent and career success, Joey is becoming discouraged. While his animals and land are more efficient than ever, the demand and price for milk is ever decreasing in California. Like many California dairymen Joey “loves dairying so much that he will lose money his whole life doing it.”

U.S. Dairy Industry Overview

In the United States dairy products are produced in every state, however the top five dairy producing states account for over 50% of the total U.S. dairy receipts. According to the USDA, dairy products range from cheese, fluid milk, yogurt, butter, and ice cream to dry or condensed milk and whey products (Cessna).

Dairy farms in the U.S. are mostly family managed and owned and are in partnership with producer cooperatives. As an industry, the number of dairy farms has been decreasing and the number of cows per ranch have been increasing (Cessna). Because of the exponentially higher efficiencies and production costs of the larger dairies, the smaller dairies are becoming discouraged from lack of profits, and lack of assets to acquire land for expansion. This phenomenon of consolidation is likely to continue in the future (MacDonald).

The main foreseeable issue with these massive dairy farms is that there is more concentrated animal waste per property, increasing incidence of environmental pollution.

California Dairy Industry Overview

California’s dairy industry is the largest milk producer in the nation. It has been the leading producer since 1993. In addition, California is the leading producer of dairy products such as ice cream, butter, whey protein concentrate and nonfat dry milk. In 2014, California produced 42.3 billion pounds of milk, supplying 20% of the nation’s total milk and contributing to about 40% of the U.S. total exports (Dairy Pressroom). There are 32 recorded counties that produce milk, but out of that number, the top ten account for approximately 94.8% of California’s production. The county of Tulare, Merced and King together produced 53% of California’s production (Merlo). Milk production from the
top ten counties is shown in **Exhibit 1**. Currently there are 1,450 dairy families in total, whose farms house approximately 1.78 million milk cows.

Out of all the agricultural commodities produced in California, the dairy industry is the top agricultural income earner. In 2014, the state’s milk production generated $9.4 billion, making it even more profitable than almonds, which generated a total of $5.9 billion (CDFA). Furthermore, in 2014, the wholesale dairy products generated $25 billion. The industry contributes $21 billion to the state’s economy, where $7.4 billion consists of income to the industry owners and workers, and $13.4 consists of related, outside industries such as feed, veterinary and accounting services used for dairy production, electricity, packaging, equipment and trucking services used by processors (ANR Blogs). The dairy industry has 189,000 jobs associated with it. From this number, 30,000 jobs are located on the farm and 20,000 jobs are in relation to dairy processing (ANR Blogs). Many other jobs are tied to the dairy industry creating a linked chain of economic contributions.

In 2014, the dairy industry experienced their best year yet. California dairy farmers were able to produce the most milk with least amount of resources. This could be attributed to the better management and improved dairy practices applied by the farmers. During a thirty year period, from 1984 to 2014, the pounds of milk produced per cow went from 15,000 to 24,000 pounds. During this same period, farmers have reduced their water usage by 23% to their fields while increasing their average crop yields by more than 40% (Dairy Pressroom). A summary of some of the facts about California’s dairy industry are shown in **Exhibit 2**.

Despite all of these great statistics, over the last few years, dairy farmers in California have been faced with many obstacles. One of which is the drought that has caused California dairy farmers many many issues. As a result of the farmers experiencing a shortage of water supply, they have been forced to neglect portions of acreage that was dedicated to growing feed for cows, which inevitably makes the feed scarce and expensive. In Tulare alone, farmers haven’t been able to plant 24,000 acres that were specifically dedicated to growing feed for cows (Sacks). Subsequently, dairy farmers paid 12.4% more for feed in 2013 than in 2012 while prices continue to increase. Furthermore, farmers from the Central Valley are paying on average ten times more for their herd and crops (Sacks). Organic dairies have struggled even more since the organically produced feed is even more expensive. Also, organic farmers can’t meet the USDA’s requirement of the minimum number of days a year that their cows have to graze on pasture because most of California’s pastures are too dry.
Another struggle that the dairy industry is facing is the decrease in milk prices. California milk production and milk prices are shown in Exhibit 3. The cause for this decrease can be attributed to the oversupply of milk and the reduced exports to countries such as China as it has been able to increase their milk production substantially. In addition, over the last few years, the demand for fluid milk has declined. A chart showing the decrease in demand for milk is shown in Exhibit 4. But for most of the dairy farmers, the largest pricing issue is caused by the California pricing system used. California has its own system for determining what processors pay farmers for their milk. They do this by using a complex formula that many farmers argue does a poor job of incorporating the increasing costs of feed and production, resulting in what some consider an unfair price for their milk (Sacks). A combination of pricing factors has made it hard for California dairymen to break-even, forcing some to go out of business, and others to relocate to neighboring states where prices for fluid milk are greater and feed costs and water availability are better.

**Business Assets**

Fernjo Farms consists of three dairies totaling at 3,500 head of cattle. All three dairies’ are in close proximity to each other and are located on a total of 400 farmable acres. Each of the three milking parlors has a different design and is particularly used for either Jersey or Holstein milking. The first dairy has a double-16 parallel with drive-through free stall barns for 1,000 Holsteins. The second dairy is an 18-stall flat barn with open lots for 700 Jerseys, while the third dairy has a double-10 herringbone with drive-through single free stall barn for 500 Jerseys.

Many of the buildings on the property are weathered, outdated and are in need of improvement. The tin roofs on some of the facilities are full of leaks and rust. These roofs require replacement to ensure cow comfort and efficient feed storage. The milking parlors are also running off of much older equipment than the larger corporate dairy farms that have 10,000’s of cows. One of the dairies is still in operation on the original property and facility that the grandfather Joe bought nearly 100 years ago. Although the equipment on these dairies are older, they are still very operable and and have caused no major barriers to production efficiency and success.

When Fernjo Farms first started out they had 100% Holstein cattle. However as time progressed, their percentages of cows evolved to 50% Holstein and 50% Jersey. Holsteins are more profitable under the fluid milk market because they are larger in size and therefore produce more pounds of milk per cow. Jerseys on the other hand are more competitive under component milk markets because they produce a higher
percentage of butterfat, even though they produce less total pounds of milk per cow. These two dairy breeds have emerged to be the top breeds in the U.S. because they have the ability to convert forage-based diets into milk and milk components. With Jerseys having a higher percentage of milk components, producers feel that they are more suitable for today’s changing demands in the marketplace. Especially since cheese and yogurt pricing has been on the rise, while fluid milk pricing has been on the decline for the last 10-15 years. Although producers feel the Jersey cow is more suited for today’s market, Land O’Lakes does not compensate for having less milk weight overall. If Fernjo Farms were to switch to an all Jersey herd, they would need to switch to a cooperative that is more rewarding for Jersey milk than the prices Land O’Lakes currently offers.

Since Fernjo Farms has not been able to expand their dairy operation because of volatility in the milk market and high land prices in the surrounding area, they have started to look into diversifying their business. A big trend right now in the San Joaquin Central Valley is planting almond and pistachio trees. In January of 2016, Joey decided it would be wise for Fernjo Farms to plant 40 acres of almond trees. Planting almond trees is quite an investment because it is essentially placing money into growing a crop that not provide any income from for at least four years when the trees start coming into production. Four years may not seem that long, but a lot can change to the prices in the market during this time. Once Fernandes’ almonds come into production, there is no guarantee that almond prices will continue to be a such a high-dollar commodity as they have been in the past.

Fernjo Farms has also experienced some issues with the wells on their farm. Last summer Joey lost two wells, which had caused one of their dairies to lose water completely. This issue set the business earnings back substantially as they were forced to to import water from another dairy in order to keep the dairy operation and animals alive. In addition to these expenses, Fernjo Farms had come to a long-term solution that they needed to have a drilling company come out and redrill their wells, which set them back an easy $300,000.

**Cooperative Choice**

Dairies in the U.S. partner with co-ops for the purpose of increasing efficiency in marketing and distributing of their dairy products. Fernjo Farms decided to ship their fluid milk to Land O’Lakes, Inc., a farmer-owned co-op, because its California headquarters are conveniently located in Tulare County. The grandfather, Joseph Fernandes, had made this decision during the inception of the family business and
Joey, along with his brother's dairy operations have remained loyal to this cooperative ever since. Because of the cult-like nature of members of opposing co-ops in this region of California, it is not surprising that many dairymen decide to stay loyal to certain organizations rather than constantly switching to the most profitable association.

Land O'Lakes, headquartered out of Minnesota, was established by 320 dairy farmers in 1921, and was originally called the Minnesota Cooperative Creameries Association. Eight years after the butter marketing association’s inception, the cooperative decided to expand into the Ag service and feed businesses, giving the association a full circle touch with agriculture (Land).

In the Ag service sector, Land O'Lakes helps independently owned and operated Ag retailers compete by providing them with “technical know-how, proprietary tools, and research-based solutions to help farmers win in the field and in the marketplace” (Land). This sector brings in $4.8 billion in revenue and includes brands such as Winfield, Answer Tech, and Answer Plot.

The feed sector of the cooperative drives many innovative research projects in attempt to strive for quality excellence in the animal nutrition industry. Currently Land O'Lakes is celebrating over 90 years of innovation at the Purina Nutrition Center and has approximately 100 patents for animal feed advancements. The feed sector contributes $4.8 billion to Land O Lakes’s total revenue and includes the brands Purina, Mazuri, and Land O'Lakes Animal Milk Products (Land).

The final and original sector, the dairy foods sector, represents high quality dairy products bearing the Land O Lakes name and is home to the number one butter retail brand in the United States. Land O'Lakes currently manages about 13 billion pounds of milk resulting in $4 billion of revenue. The main brand name for the butter, margarine and spreads is Land O'Lakes however, the cheeses are also labeled under the brands of KozyShack and Alpine Lace deli cheese and meat.

As a whole, Land O'Lakes currently employs about 10,000 employees and has operations in 50 states and over 50 different countries. In 2015 the company produced $13 billion in revenue, allowing the dispersion of $161 million back to its 4,331 members. Of these members, Fernjo Farms is one of the 2,259 dairy producing members who received a financial kickback from the cooperative (Land).
Employee Management

Fernjo Farms employs about twenty-five people that take care of the three facilities, with most of them being milkers. Fernjo Farms also has a herd manager and a mechanic. The company tries to keep its employees comfortable and willing to stay with for a long time. As a result, Fernjo Farms gives the employees great benefits. The main benefit that most of the employees utilize is the housing that the company provides near the three milking facilities. This a win-win situation for both the employees and the company. The employees are benefited by living close to work and the company is benefited by having its employees close in case of an emergency with their cows. In addition to the housing benefit, many of the housed employees have their gas, water and electricity paid for since it is tied into the dairy’s expenses. Employee cost of living is summed to an extremely minimal monthly fee for rent. The company also provides them with insurance and a substantial salary. For these reasons, the majority of Joey’s employees have been incentivized to stay loyal to the farm causing Fernjo Farms to experience a low turnover rate of employees. This has given the business a positive advantage during a time when it has been hard to locate and contract farm labor in California.

Even though the employee turnover rate is low, it is inevitable that all of their employees will not be working for them forever. In certain occasions, an employee gets terminated or the employee just decides to leave. With the growing presence of organized labor and labor attorneys, they have found that most of these terminated employees quickly come after the business with lawyers claiming that they were never paid for overtime or that their back, knee, shoulders, or arms hurt from the working conditions. For this reason, Fernandes pays workmen’s compensation and insurance every month just to be vigilant and avoid future problems.

Milk Production Factors

Reduction in milk production is one of the major economic impacts of climatic stress in dairy cattle. While the overall decrease in milk yield due to heat stress is more prominent in Holsteins than in Jersey cattle, it still plays a major factor in overall production for both breeds. There are a few factors that contribute why the heat plays such a major role in milk production in dairy cattle. First of all, the heat causes decreased synthesis of the hepatic glucose and lower non-esterified fatty acid (NEFA) level in their blood during heat stress. This causes reduced glucose supply to the mammary glands and results in low lactose synthesis, which ensures a lower milk yield. The reduction in milk production is further intensified because when a cow is heat
stressed, the amount of food they consume decreases to compensate for the high
temperature outside. In fact, only 35% of the reduced production is due to their lack of
appetite in the heat and 65% is attributable to the direct effect that heat stress has on
the cattle’s body (University of Arizona, 2010).

Fernjo Farms has made great conscious efforts to increase their cow comfort in order to
keep their milk production at the highest possible level. According to Fernandes, “The
more comfortable you can make it for your cattle, the more milk you will receive from
them”. During the summer months in Tulare there are weeks on end of consistent 100+
degree weather. Keeping the cows comfortable and continually producing high milk
yields can be somewhat troubling for dairy farmers during the sweltering summer
months in the San Joaquin Central Valley when cows produce the best in 50 degree
weather. Fernjo Farms uses large fans and misters to keep their cows cool and it has
helped increase cow comfort resulting in higher milk production. They have also
converted from dry manure to sand bedding in their cow stalls. Converting to sand
bedding increases the cow’s comfort by putting less pressure on the cow’s knees,
hocks, and hooves. It also works as a cooling agent for the cow when they lay down in
the stall. Lastly to increase cow comfort, they have installed rubber matting on the floors
leading into their milking facilities. Rubber mats leading into the milk barn improves
traction which improves the footing for livestock, decreases the number of teats stepped
on, lessons the incidences of mastitis, reduces swelling in the legs as well as hoof
abrasions (Ellen, 2013). A reduction in these injuries results in less cows sent to the
hospital pen and helps save on veterinary bills for the farm.

The average Holstein cow produces around 20,000 pounds of milk, or 2,440 gallons of
milk for every lactation period. With a standard lactation lasting 305 days, that is the
equivalent to 65 pounds (slightly above 8 gallons) of milk per cow per day. On the other
hand the average Jersey cow produces around 46 pounds, or 5.75 gallons per day
(Bailey, 2005). The Holsteins at Fernjo Farms are above the annual average with
24,700 pounds of milk for every lactation period, while their Jerseys produce above the
average at 18,600 pounds when milked three times a day.

Fernjo Farm’s higher than average milk output has a lot to do with their feed watch
program that manages the cows feed ration. Holstein and Jersey cows have similar
feed efficiency, so the ability to monitor feeder accuracy, as well as adjust ration levels
has resulted in more consistency in milk components. Overall this causes less
shrinkage and waste, making it one of the major factors behind their higher than
average production. This is a wireless program that can monitor a feed truck at multiple
different locations, and has helped lower their feeding variance to below 3%.
Over the last few years Fernjo Farms has been consistently changing their feed rations in order to provide the best and most balanced ration at a lower cost of production for their business. At the moment, Joey uses a feed ration that consists of sorghum, alfalfa, corn silage, rolled corn, whey, soybean meal, by-products and probiotics that were primarily purchased off-farm. This is partly because of the drought, which has caused costs of producing feed on their own ranch to be only slightly more efficient than going out and purchasing their feed from an external source.

Costs of production are high, but this hasn’t stopped Fernjo Farms from continuing growing their own silage corn. Costs of seed, fertilizer, pesticides, equipment, employees, and most importantly water are higher than usual, and their yields haven’t been as forgiving as they would like because of the escalated input costs. Not only has the cost of producing their own feed been higher in recent years but it has also driven up feed costs in the open market. Fernjo Farms is constantly checking the future markets in order to lock in cheaper prices for their feed months prior to when the feed has actually been produced.

With the farm having issues expanding their capacity, the business has been investing money into genomic testing for maximizing genetic superiority in the herd. This is a new method of genetic evaluation of dairy cattle. Genomic testing provides the opportunity for increased accuracy of selection of young females in a herd (Blair, 2010). Since they are not capable of expanding the herd, they are focusing on producing the most output from the same number of cows on their farm. Genomic information combined with traditional data is more reliable and accurate as a predictor of the genetic merit of young dairy animals than was ever previously available to the dairy industry.

By simply punching out a piece of a young heifers ear, Fernjo Farms is able to receive genetic information relaying factors that will constitute whether the heifer will be a viable option for their herd. This test relays genetic factors related to each female calves potential milk production success. If Joey has a foresight that a cow will not live as long or will not produce a specific amount of milk throughout its operable lifetime, he will sell it at a replacement heifer sale and substitute it with a more genetically superior animal. Even though Fernjo Farms has experienced an increase in profits after implementing the use of this technology, it is still important to remember that the genomic information reported is still only a prediction, and the cows final outcome is always subject to some variation (Blair, 2010).
Management Situations and Decisions

Clearly, there are obstacles that Fernjo Farms has to come to terms with in respect to the California dairy industry as well as the national industry. The market just isn’t what it used to be for a dairy farmer like Joey Fernandes. He put it into perspective by stating, “In this industry, for every single good year there are three bad ones. Finding ways to stay on top of the industry and adopt proactive practices to avoid getting damaged by the economy or climate, is a full-time job”.

Ever since Joey’s father passed away two years ago, Joey has become the sole owner and decision marker of Fernjo Farms. And between the 3,500 cows, 400 acres, three facilities, and only 25 employees to help with the work, Joey Fernandes has his work cut out for him. He is working on the farm before the sun rises, and doesn’t begin to relax at home until the sun goes down. In the morning from 6 A.M. until noon, Joey is working on-site with the cows primarily. He spends the majority of this time being very hands-on facilitating vaccinations, pregnant checking the cows, adjusting the food rations and micromanaging further to make the cows more comfortable. The cow’s comfortability is crucial to the production of milk. If the cows are too hot or too cold, the yields they produce can fall drastically.

From noon until around six o’clock at night Joey is in his office doing administrative work that is mandatory to make sure the operation is running smoothly and constantly. The main aspect of the operation that Joey has to manage daily, is researching and analyzing price trends. This is why he has had to incorporate new software to help him predict milk prices to help him gauge what price to lock in at the end of the day. This is only one of the dozens of decisions Joey has to make being the sole decision maker of Fernjo Farms. For example, last summer during the drought, Fernandes lost two wells and he had to quickly plan how he was going to address it. Luckily, Fernandes was fortunate enough to hire a man to come out on the spot and drill another well 350 feet into the ground, but for a fee of hundreds of thousands of dollars. Other neighboring dairy farms were not as fortunate and had to sell their farms. During this time of the day Fernandes is also dealing with the never ending regulations that are being placed on him. Operating in a liberal state such as California, makes Fernandes’ job very stressful and inefficient. In the last couple years, he has had to deal with the fact that the government is putting limitations on the dust his farm creates as well as nitrogen levels. These are only a fraction of the struggles the government has laid on him. Fernandes also has to deal with the fact that he is placed on the state Milk Marketing Order which means although Californian milk is of the highest quality, they receive the lowest price
for it. In fact, it is so low that when Fernjo Farms produces excess milk above their quota, they are sometimes required to dump the excess.

Between all these factors, in addition to lawsuits from employees and low demand for milk products, Fernandes sometimes feels like he can’t catch a break. This is why he has to stay positive looking into the future and just implement new strategies that are logical and affordable to make sure the family farm of four generations stays alive.

Looking to the Future

The future for the Californian dairy farmers is not looking very promising according to Fernandes. More and more farms in Tulare are selling out and leaving the state to try to operate their farms elsewhere, and idea which has crossed Fernandes’ mind in the past. But the possibility of selling out and moving is utterly a last resort. Instead Fernandes has decided to implement strategies to be proactive in case the industry doesn’t somehow improve in the foreseeable future. Because although Fernandes would like to, it is just impossible to predict where one will be in the next three years or even next year in this industry, due to the volatility in demand, regulations and ecological factors. When owning a dairy farm, there are numerous ways to try and innovate and implement new tactics that can assist in possible shortcomings. But the challenge is to find the right combination of what is feasible in terms of weighing the costs and benefits.

Instead of making one, expensive investment to modernize the dairy farm to counteract the challenges they face, Fernjo Farms is implementing many diversified, less expensive projects to progress into the future. Since owning land in California is far from cheap, Fernandes has ruled out the option of expanding their land and obtaining more cows. They have found that expansion just isn’t a feasible option anymore. Instead, Fernandes has converted his herd to include more Jersey cattle, invested his money in enhancing cow comfort, and incorporated genomic testing all in hopes of increasing higher profit yields. Fernandes has also diversified his land by planting forty acres of almond trees as an experiment over the next couple years. Fernandes seems optimistic about this implementation specifically because of how trees having proven to be very profitable in the San Joaquin Valley recently. But mainly, the welfare of Fernjo Farm’s future lies in the hands of his successors, his three sons.

Looking to the future, Joey’s three sons are set out with the goal to create an empire of their own under the “Fernjo Farm” name. Each students of Cal Poly, have set out into different career paths to help bring back a wide range of skills and strengths back to the
family dairy. Landon, the oldest, is a chattel evaluator at Farm Credit West in Tulare and is establishing relationships with those in the banking industry that will in turn assist in the acquisition of funds to expand the business. Preston, the second oldest, has expressed the greatest passion for the dairy industry and is double majoring in Dairy Science and Agribusiness at Cal Poly to gain an encompassing overview of dairy business operations and opportunities. Lastly, the youngest, Collin is majoring in crop science in hopes of further diversifying the business to mitigate losses and increase corporate profits.

Through successive generations, Fernjo Farms might finally find its niche and may finally have something to show for it.
## Exhibit 1  
Milk production of the top ten counties

<table>
<thead>
<tr>
<th>Rank</th>
<th>County</th>
<th>2014 milk production in pounds</th>
<th>Percent of state’s milk output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tulare</td>
<td>11,555,074,430</td>
<td>27.3%</td>
</tr>
<tr>
<td>2</td>
<td>Merced</td>
<td>6,460,220,359</td>
<td>15.3%</td>
</tr>
<tr>
<td>3</td>
<td>Kings</td>
<td>4,418,690,842</td>
<td>10.4%</td>
</tr>
<tr>
<td>4</td>
<td>Stanislaus</td>
<td>4,276,801,395</td>
<td>10.1%</td>
</tr>
<tr>
<td>5</td>
<td>Kern</td>
<td>4,096,363,973</td>
<td>9.7%</td>
</tr>
<tr>
<td>6</td>
<td>Fresno</td>
<td>2,842,302,353</td>
<td>6.7%</td>
</tr>
<tr>
<td>7</td>
<td>San Joaquin</td>
<td>2,460,191,603</td>
<td>5.8%</td>
</tr>
<tr>
<td>8</td>
<td>Madera</td>
<td>1,890,690,392</td>
<td>4.5%</td>
</tr>
<tr>
<td>9</td>
<td>San Bernardino</td>
<td>1,187,278,784</td>
<td>2.8%</td>
</tr>
<tr>
<td>10</td>
<td>Riverside</td>
<td>912,512,331</td>
<td>2.2%</td>
</tr>
</tbody>
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Source:  

<table>
<thead>
<tr>
<th>County</th>
<th>Number</th>
<th>Percent of State total</th>
<th>Number of dairies</th>
<th>Average number of cows per dairy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tulare</td>
<td>484,258</td>
<td>27</td>
<td>281</td>
<td>1,723</td>
</tr>
<tr>
<td>Merced</td>
<td>276,359</td>
<td>15</td>
<td>228</td>
<td>1,212</td>
</tr>
<tr>
<td>Stanislaus</td>
<td>179,884</td>
<td>10</td>
<td>207</td>
<td>869</td>
</tr>
<tr>
<td>Kings</td>
<td>183,775</td>
<td>10</td>
<td>119</td>
<td>1,544</td>
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<td>Kern</td>
<td>167,347</td>
<td>9</td>
<td>51</td>
<td>3,281</td>
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<tr>
<td>Fresno</td>
<td>116,939</td>
<td>7</td>
<td>79</td>
<td>1,480</td>
</tr>
<tr>
<td>San Joaquin</td>
<td>102,934</td>
<td>6</td>
<td>113</td>
<td>911</td>
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<td>Madera</td>
<td>78,430</td>
<td>4</td>
<td>43</td>
<td>1,824</td>
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<tr>
<td>San Joaquin Valley total</td>
<td>1,589,926</td>
<td>89</td>
<td>1,121</td>
<td>1,418</td>
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<tr>
<td>--------------------------</td>
<td>-----------</td>
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</tr>
<tr>
<td>State totals</td>
<td>1,789,440</td>
<td>100</td>
<td>1,470</td>
<td>1,186</td>
</tr>
</tbody>
</table>


Exhibit 2 Summary of California’s dairy industry facts
Real California MILK FACTS

23,702 Pounds
Average amount of milk produced by a California dairy cow²

#1 Milk Producer in U.S.¹

24,000 POUNDS OF MILK
Produced per cow in 2014, up from 15,000 pounds in 1984

20%
Of U.S. milk is produced in California³

40%
Of U.S. dairy exports are from California²

42.3B
Pounds of milk produced each year³

45%
Amount of California milk that makes California cheese¹

Fluid milk in California milk contains more protein, calcium and nutrients than milk that meets federal standards.

All data provided by the California Milk Advisory Board, except as noted.
1 CDFA 2014 2 As of 2015 3 Updated June 2015

Source: http://www.californiadairypressroom.com/Press_Kit/Dairy_Industry_Facts
Economic Impact:
CALIFORNIA’S DAIRY INDUSTRY

189,000 JOBS
depend on the California dairy industry
including
55,000 milk production
and processing jobs

Source: http://www.californiadorpressroom.com/Press_Kit/Dairy_Industry_Facts
Facing a Slump

Dairy farmers in California are facing challenges including drought and a decline in prices.

**California milk production, change from year earlier**

12%

**U.S. milk prices*, change from year earlier**

40%

*Per hundred pounds
Source: Agriculture Department

Source:
http://www.wsj.com/articles/conditions-sour-for-californias-dairy-farmers-1444296601

THE WALL STREET JOURNAL
Figure 2
California milk production and prices received, 2014-2016

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Source: USDA, National Agricultural Statistics Service.

Source:
Exhibit 4  Decrease in demand for milk and cream consumption

**U.S. Milk and Cream Consumption**

Pounds per capita

Source: USDA

American Milk Consumption Has Plummeted
Per capita consumption of whole milk in the United States (in pounds)

Source:
Bibliography


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Jordan, Ellen R. "Rubber Flooring For Cow Comfort and Productivity" 16 June 2013 Web. 05 June 2016


