Kiler Ridge Olive Oil Farm

David Ayala
Agribusiness, Cal Poly

Martin Andersen
Agribusiness, Cal Poly

Rudy Raimondi
Agribusiness, Cal Poly

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Senior Project Case Study

David Ayala

Martin Andersen

Rudy Raimondi
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Introduction

The purpose of this report is to present the results of our Senior Project Team’s agribusiness assessment of Kiler Ridge Olive Farm. The report is divided into sections including background information on the olive oil industry on a global, national and state level, a description of the Kiler Ridge business including facilities, operations, products, and marketing, and finally, a list of recommendations the company could consider to improve its market presence and bottom line profitability. Our ideas were formulated based on the results of our background research including site visits, interviews with the owner, and reading relevant articles that cover the olive oil industry from different perspectives such as producers, consultants, industry watchdogs, and consumers.
Background:

The Olive Oil Industry

The origin of the first olive trees is very unclear, however the tradition of pressing olives in order to produce olive oil has been present in the European community for centuries. Olive trees grow best in a region with long, hot, dry summers and mild winters.¹ The Mediterranean Basin is the perfect example. Though history, countries around the Mediterranean have been leading the world production and consumption of olive oil.

The vast majority of the world’s olive oil is produced in Europe, with most of European production coming from Italy, Greece and Spain. The largest non-European olive oil producer is Tunisia, the country with the third largest production in the world. Thanks to a variety of reasons, global olive production has been low in recent years, during 2014 the total yield hit a 15 year low. This low yield wasn't caused by a single factor, but rather a combination of several unfortunate events for olive producers in Italy and Spain. Both countries suffered bad weather at the wrong times, and struggled with olive fruit fly infestations. Also, many orchards in Apulia, Italy, were attacked by a bacteria called Xylella Fastidiosa. Which ended up destroying almost one million trees. Global production slipped about 17% from 3.2 million tons in 2013 to 2.4 million tons in 2014. The low production of 2014 lead to a spike in the price of extra virgin olive oil. According to a report released by the International Olive Council, a pound of Italian oil bought directly from a producer, fetched $3.27 at the end of November, up 121% from November 2013².

The olive oil industry employs millions of people in Spain, Italy, Greece, Portugal, Morocco and Tunisia. Poor production is not only bad for olive oil producers, but it negatively affects the entire economies of these countries. This year’s, 2015 yield should be significantly increased due to the cyclical nature of olive oil production. Olive trees tend to have a two year cycle where a low production year is usually followed by a high production year and vice versa. In order to fight this and have a more stable production, olive farmers follow certain practices such as pruning after the low-yield year. However, even with this, total yield is highly variable and hard to predict.

Despite these highly variable olive oil yields, there have been strong trends in the olive oil world, such as the increased consumption of olive oil in countries outside Europe. During the last ten years, countries around the world have been introducing olive oil to their diets thanks to easier global trade and new research being done with regards of its health benefits. With growing concerns about obesity, diabetes, and cardiovascular disease, the United States has a great demand for olive oil even though is not a part of traditional diets. Olive oil consumption in the U.S. has grown rapidly in the last decade. U.S. consumers increasingly recognize the health benefits of olive oil, and the U.S. Food and Drug Administration authorized sellers of olive oil to make certain qualified health claims on their products in 2004. Olive oil is low in saturated fat and high in omega-3 fatty acids that reduce the risk of heart disease. While other vegetable oils, such as canola, also have low levels of saturated fat, olive oil has additional beneficial properties, such as antioxidants and polyphenols (anti-inflammatory compounds that promote healthy cardiovascular function). Extra virgin olive oil contains more polyphenols than any other grade.
of olive oil, elevating its health benefits.\(^3\) Consumer awareness of the health benefits associated with olive oil as part of the “Mediterranean diet” has particularly helped heighten consumer interest in olive oil.

Growers around the US have been motivated to start producing olive oil in order to fulfill the increasing demand, but the competition from countries with much bigger industries has made this task very difficult. Olive oil production in the U.S. is minimal; we produce less than 2% of our total consumption, and we heavily rely on European imports. In 2013 the United States produced 5,000 tons of olive oil, a rather paltry amount compared to the EU’s production of 2,476,500 tons (refer to Figure 1). With such a small production, the US has become the biggest importer of olive oil in the world.

In the United States, olives are only produced in six states; Arizona, California, Texas, Georgia, Florida, and Hawaii. Out of these six states, California produces by far the most thanks to an ideal growing climate and longer history of growing olives (refer to Figure 2 and 3). Olive trees were first brought to California in the late 1700s by Spanish missionaries traveling north from Mexico. It is speculated that they brought trimmings from a Peruvian variety that developed from Spanish seedlings\(^4\). As these missionaries travelled further into California they left behind them a trail of olive groves from San Diego all the way to Sonoma. Remarkably enough, some of the original groves still exist today thanks to the phenomenal life spans of the trees.

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Commercial production of olive oil in California first began in 1871 by the Camulos Oil Mill based out of Ventura. By 1885, California olive growers were producing quality oil from roughly 2,000 acres of planted groves in coastal and mountain foothill areas while operating in a highly competitive market. Growers took advantage of a growing industry by significantly increasing production. However, by 1900 prices dropped significantly thanks to the introduction of imported olive oils from Europe and changing consumer preferences. Competition from Europe has been difficult to overcome: they’ve been growing olives for much longer periods of time, have the appropriate processing and distributing networks established, and can supply olive oil to the market at much lower prices than US producers.

Another factor that makes competition with imported oils difficult for California producers is the absence of international regulatory standards. The most important organization that tries to increase awareness around the world about the different qualities of olive oil is the International Olive Oil Council (IOOC). However, even with increased awareness, they haven't been able to significantly increase regulation and enforcement around the globe. Since 1959, the IOOC has attempted to place a major emphasis on enhancing the environmental and economic impacts of the olive oil and table olive industries. One of their many ventures has included the creation and implementation of standards applied to olive oil around the globe. By creating a series of chemical standards, the IOOC was able to establish a way of grading different types of olive oils with “Extra-Virgin” being their highest quality standard.

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Despite the great efforts of the IOOC, the US and many other countries have little to no regulations when it comes to olive oil. The phrase “Extra Virgin” doesn't have a regulated definition in the US, which allows producers to label oil as extra virgin without having to meet any specific criteria. This lead to huge amounts of mislabeling and skepticism about the quality of the different olive oils present in the market. In order to combat this, California growers decided to take matters into their own hands by establishing the California Olive Oil Council (COOC) and creating a certification process for identifying extra virgin olive oil. To gain COOC certification, an oil must pass both a chemical analysis and sensory evaluation\(^8\). The sensory evaluation portion was implemented as a further precaution to ensure the oil is indeed of high quality, a step not employed by the IOOC. The COOC has also made valuable headway into educating U.S. consumers about olive oil, from providing health and nutrition statistics to organizing marketing efforts for the industry. California Extra Virgin Olive Oil (EVOO) got a recent endorsement from the long running PBS show called America’s Test Kitchen when they came out with an article in their Cook’s Illustrated magazine which ranked a California higher than all the European oils they tested and one of only 2 oils to pass the extra-virgin laboratory and sensory tests\(^9\). This could create even more market demand for California produced oils.

\textit{The production process}

Olive oil production begins with a lot of planning. Choosing the proper location and the right variety of olives are key factors. Also playing larger roles in determining the quality and


quantity of oil produced by an olive tree are factors like elevation, temperature, humidity, rainfall, soil quality, and the slope of the land. Besides this, olive varieties and farm management practices, such as irrigation, pruning and harvesting techniques, also play a big role.

Certain varieties, such as the Koroneiki commonly grown in Greece and the Coratina commonly grown in Italy, produce bitter and pungent oils. Others, such as the Picual and Arbequina varieties, produce fruitier oils that are sweeter and slightly less bitter. However, it is difficult to generalize the flavor profile of a particular olive variety. Soil qualities, farming practices, and level of maturity during harvest influence the flavor profile and the shelf life of each variety.

A key decision for growers is when to harvest their crop. There is a tradeoff between oil quality and volume as the harvesting season progresses. Producers of premium extra virgin olive oil harvest their olives early in the season (October, November, and December in the Northern Hemisphere) before they are fully ripe and when the oil content of the fruit is lower. Olives harvested early have lower acidity levels and produce a more fruity or pungent oil that contains a higher level of antioxidants. Olives that are harvested late in the season (January, February, or even March) produce lower-quality oil that has a milder flavor and contains fewer beneficial health attributes. However, olives harvested later in the season typically have a much higher yield.

Another aspect than can heavily influence the quality of olive oil is the time between harvest and press. Olives decay very quickly; the absence of sugar allows bacteria to grow much more rapidly than in other fruits where sugar is present. When trying to produce extra virgin olive oil, olives should be milled within 24 hours. After that, the decay in the olives negatively
affects the flavor of the oil, and results in a much higher level of acidity. Consequently as the
time between harvest and press decreases, the quality of the oil produced increases.

**Kiler Ridge Olive Farm**

*Company History*

Kiler Ridge is a family owned and operated business that grows and presses olives in
order to make extra virgin olive oil. The owner and founder of Kiler Ridge is Gregg Bone, an
engineer who attended from Cal Tech and since graduating as made a living working as an
entrepreneur. In his past he has formed thirteen different companies, from developing software
that focuses telescopes to a company that developed high efficiency solar panels\textsuperscript{10}. Being such a
driven and intelligent individual, it’s no surprise that Greg is constantly looking for new business
ventures. The idea for Kiler Ridge Olive Oil Farm actually traces its roots to a bicycle tour taken
by Gregg and his wife Audrey Burnam. While pedaling through the rolling hills of Tuscany,
Italy, Gregg and Audrey were inspired to start growing their own olives\textsuperscript{11}.

At first, Audrey was planning on planting around 40 trees in their backyard, but that idea
was quickly scratched by Gregg. While doing preliminary research with regards to growing
olives, he realized that having only 40 trees would be a very expensive hobby, and taking it to a
bigger scale could be his next business opportunity. After finding a beautiful and perfectly

\textsuperscript{10} Bone, Gregg. “Kiler Ridge Informational Interview.” Personal Interview. 24. Nov. 2015

suitable 58 acre property in the southwest of Paso Robles, Greg and Audrey quickly got to work planting 5 different varieties of Italian olives totaling 835 trees.

Five years later, they had their first harvest, and they were able to produce their own olive oil for the first time. In 2010, they decided to start the construction of their building, which they call “The Frantoio.” In Italian, frantoio simply translates to “a place where olive oil is made.” This building is where they do most of their operations, as well as housing the mill, the bottling line and their tasting room. This building is also a perfect example of Gregg and Audrey’s efforts to promote sustainable practices in the agriculture industry. The frantoio uses solar panels as their main energy source and it has many environmental friendly construction techniques, such as having thick straw bale walls that work wonderfully for insulation. The thick walls allow them to house their oil in a room with very little temperature fluctuation without the use of any air conditioning in the storage or production area. This building is one of the reasons they can have such a high quality product for a long period of time. It is the perfect place to store olive oil thanks to little-to-no exposure to heat or direct light,

Another thing that allows them to have great olive oil is the fact that they have their own mill on their property. By owning and operating its own mill, Kiler Ridge is able to reduce operating costs over time and can produce the freshest oil possible thanks to a shorter time between harvest and press. Gregg, being the engineer he is, decided to import and modify an olive oil press from Italy in order to make his own oil. The modifications that he personally made to his milling line allow him to reduce milling time, increase efficiency and increase reliability.

The process of extracting oil from olives starts with washing the olives, and removing any leaves or small branches that could be among the olives. After being washed, the olives are crushed and converted into a paste that has both the fruit and the pit. Then, this paste is placed in
a big tub where it is brought up to a temperature of 28° C (82.4° F) and then is kneaded to allow the little drops of oil present in the paste to combine and facilitate extraction. In this part of the process, Gregg modified the machine in order to have a quicker increase in temperature. Also, he added the option to add organic enzymes to the paste which help break cell walls that were not broken by the crusher, by doing so total yields have the tendency to increase. When the kneading is done, this paste passes through a centrifuge that separates the solids (fruit and pits), from the liquids (water and oil). Finally, in another centrifuge that spins at a much faster rate, the oil is separated from the water and is then ready to be collected.

Kiler Ridge is currently able to process around one ton an hour, and during milling season the mill runs at full capacity. Gregg creates a very organized milling schedule between his fruit and fruit he mills for other growers from the region. He makes sure his mill is not left unused for more than 24 hours in order to avoid the accumulation of decaying fruit inside his machines.

The Experience

Gregg and Audrey have realized that thanks to the nature of their business, atmosphere and experience play a crucial role in attracting and satisfying customers. For this reason they have taken cues from Tuscany and the surrounding vineyards to create a high-end, yet comfortable setting that goes well with the product that they are selling. Entering the property, you drive up a winding gravel drive until you are greeted with the sight of the frantoio. The frantoio is built to resemble a barn one might find in Italy and is surrounded by row after row of olive trees.

In order to further enhance a customer’s experience, Gregg will often lead in-depth tours of the mill and production facility. Gregg has often found that individuals will find it hard to
justify spending top dollar prices for an oil until they see the involved process in creating olive oil. To further solidify the understanding of the drastic difference between Kiler Ridge’s olive oil and mass produced oil found in a typical grocery store, visitors are able to taste a variety of Kiler’s oils and then compare them to a mass produced oil. After the tasting experience and touring the premises, visitors typically understand the justified price and end up leaving with a bottle or two. Overall, Kiler Ridge has managed to both create an atmosphere and provide experiences that cater directly to selling olive oil, something that is extremely crucial when trying to sell to the luxury side of the market.

Marketing

Kiler Ridge has implemented a series of marketing measures in an effort to raise brand awareness and promote sales. Like any modern company they have employed efforts into maintaining social media pages including Facebook, Twitter and Pinterest. Kiler Ridge has been an active participant in the Paso Olive Festival since its establishment in 2009. They have been featured in many local lifestyle publications such as Travel Paso, Vino Magazine and Edible San Luis. Kiler Ridge has also been featured by award winning chefs like Suzanne Goin at her A.O.C. Restaurant in Los Angeles. It's well known that Gregg is an avid bicyclist, so he turned his passion into a marketing opportunity for Kiler. They sell Kiler Ridge bicycling jerseys online and in-house, participated as a repeat sponsor at the Great Western Bicycle Rally, and encourage local bike tours such as Paso Bike Tours to stop by and do a tasting. Other tours have also stopped by as well such as the local jeep adventure tour and countless wine tours. Customers also have the ability to sign up for a monthly newsletter updating them on the latest olive oils offered as well as any other new information surrounding the company.
Kiler Ridge presents itself on its website as a small homey operation that strikes a quirky balance between Paso Robles ranching tradition and European sensibility for the finest products. They appear to be aligned with the latest California trends for local, sustainable, farm to table food products. The owners are depicted in casual dress and their farm dog Marcus is shown entertaining guests to their tasting room. Cows are called spectators in one of their captioned photos. Kiler Ridge branding consists of a pair of brown ranch boots with an olive branch laid across the top, and labels that show two olives hanging below a leaf done in yellow and green with tinges of purple gray used to shade the olives and for the writing.

Their current marketing efforts have been very successful. They have been able to increase their brand recognition and consumer awareness about the quality of their product. During the last couple years they have been able to sell out of their oil with most of their sales at retail prices. However, this year’s total yield was by far their largest yield ever (refer to Figure4), and they might not be able to sell out of oil by the end of the season if they maintain their current marketing.

*Club Frantoio*

Kiler Ridge also offers customers the opportunity to sign up to be apart of Club Frantoio. Benefits of the club include receiving two shipments of Kiler Ridge oil each year, once in November and the other in May. Each shipment includes three different oils shipped at no charge. Other benefits include first access to limited availability oils, invitations to pick olives by hand for a true hands-on experience, and complimentary tasting for members and their guests.¹²

Their Products

When formulating the idea for Kiler Ridge, Gregg and Audrey knew they wanted to make high quality oil no matter what. They knew they had the location, the knowledge and the resources to do just that. It’s been five years since Kiler Ridge first started producing oil and during those five years they have received countless awards for their efforts. As stated above, producing such low quantities of high quality oil means selling out of an oil before next season is the norm. This is by no means bad news for Gregg, as he is getting constant reassurance that the oil he is producing is something people want to buy. This also establishes the idea that if Gregg is to expand further, he has the demand to back up expansion. This, of course, is under the assumption that Kiler Ridge remains precarious of getting too big, too quickly as they would not want to at all compromise the quality of their product. Below, are descriptions of the oils that people can’t seem to get enough of!

New Season Tuscan Olio Nuovo

250ml Bottle $25.00

Kiler Ridge’s New Season Tuscan Olio Nuovo is pressed from Tuscan olive varietals produced on their own estate. An oil described as “Olio Nuovo” is the first olive oil released each year so it is a very natural and intense olive oil, exhibiting a flavor experience unlike other traditional olive oils. Thanks to such a natural and fresh approach to an oil, this Tuscan Olio Nuovo should be consumed within 3-4 months after pressing to ensure an uncompromised tasting experience. Users often describe this olive oil as bitter and peppery, with overtones of grassiness and other

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fresh greens also present. Olio Nuovos are commonly used as a dipping oil, finishing seafood, spicing up grilled vegetables or garnishing soups or salads.

*Lucca Olio Nuovo*

250ml Bottle $24.00

Kiler Ridge’s other Olio Nuovo is their Lucca variety. Pressed from Lucca variety olives harvested in November of 2015 just east of Paso Robles, this medium intensity olive oil offers a slightly tasting experience from their Tuscan effort. This olive oil is buttery and creamy rather than bitter, exhibits a moderately peppery finish and aromatic notes of eucalyptus and green banana. Once again, due to the purity of this oil and the timeliness of its milling, it should be used within 3-4 months of harvest to ensure the most flavorful experience.

*Kiler Ridge’s Tuscan Extra Virgin Olive Oil*

250ml Bottle $28, 500ml $52

This is Kiler Ridge’s most popular olive oil, and quickly runs out each season. Blended from five olive varieties -- frantoio, leccino, maurino, pendolino, and coratina, it creates a wonderful balance of olive fruitiness, bitterness, and pungency/pepperiness. Overall, this robust olive oil can be used in just about any oil application, including dressing salads, in pasta and rice dishes, finishing grilled meats and on roasted vegetables. This all-purpose oil is a must for any at-home cook looking to add another dimension to their dishes.

*Gregg’s Reserve*

Price varies per year

Gregg’s Reserve olive oil is pressed using the same variety of olives used to create the Tuscan EVOO. However, it is pressed within thirty minutes of harvest, meaning that while the Tuscan’s
desirable attributes like the grassiness and nuttiness flavors remain present, bitterness is avoided. Thanks to the highly involved process of pressing, very low amounts of this oil are produced each year.

2015 Miller’s Tuscan Extra Virgin Olive Oil

500ml Bottle $45.00

This olive oil is made from Tuscan varietal olives farmed in late 2014 by two olive growing families in the Paso Robles area, and specially selected for their excellent quality. Olives were harvested and quickly brought to the press to be milled within 4 hours of harvest. This olive oil is moderately robust, and thus a little less peppery and intense than the Estate Tuscan extra virgin olive oil.

2015 Lemon Olive Oil

100ml Bottle $10.00, 250ml Bottle $22.00, 500ml Bottle $42.00

Lastly, Kiler Ridges Lemon Olive Oil was specially requested by tasters craving a slightly more fruity oil. Grown from local Paso Tuscan varietals, this oil still retains its peppery and bitter roots, with just a hint of lemon added ensure other flavors aren’t overwhelmed.

Other Oils

Kiler Ridge often offers small runs of specific varietals, such as their coratina and maurino varieties. These oils offer the same freshness and balance one would expect from a typical Kiler Ridge oil, but with their own taste traits coming into play as well. For example, a coratina oil is going to be a little more bitter and fruity with floral and cherry notes being evident. Kiler Ridge expects these low volume runs to sell out quickly.
Other Products

Kiler Ridge also offers a variety of other labeled products including hand soaps, body balm and candles. Oil or oil by-products produced at Kiler Ridge are used to enhance each of these individual products. They are handcrafted by San Luis Obispo and Paso Robles artisans to maintain Kiler Ridge’s ideals of producing local, high-quality products.

Recent Challenges & Innovation

By now, it is clearly evident that Gregg loves taking matters into his own hands when a problem arises. Below are two situations where Kiler Ridge has faced problems with external sources, and the response Gregg and his team have come up with to solve them.  

Labor

Gregg and Audrey have found it difficult finding effective sources of labor to harvest the olive crop in October and November. Harvest must be done all by hand, there aren’t any handy shortcuts or advanced machinery to reduce harvest times. On top of that, thanks to the low amount of olive farms in California, there hasn’t been a real necessity for specialized olive pickers, so they are extremely hard to come across. Gregg and Audrey have also run into problems with their local labor contractor, having instances where workers will be scheduled for a specific day and no one shows up. Adding unnecessary time and money to an already hectic harvest season. In order to combat this, Gregg thought that throwing “Pick up” parties for Club 

Frantoio members and other friends of Kiler Ridge. “Pick up” parties are exactly what they sound like, club members and their friends are able to help by rolling up their sleeves and providing much needed harvest help during the hectic harvest season. Not only is Gregg getting fruit off the trees, customers are getting further involved in the olive oil making experience.

Outside Contamination

Gregg has done a lot of research and experimentation with regards to growing olives. However, he can’t micromanage every aspect of growing and because of this has, run into some difficulties. Many individuals in the Paso region have a couple olive trees in their yards to enjoy as a hobby or just for aesthetic purposes. The owners of these rarely control for common pests such as the Mediterranean olive fruit fly. Which represents one of the biggest threats for olive growers. When people in the area fail to take the necessary precautions the fruit fly can easily reproduce and propagate in the area. In order to protect his olives from this pest, Gregg not only uses organic pesticides, but also tries to educate the community in order to stop the problem at the source. Every year he has two “community crush days” were he offers his milling services for free to those who bring less than 100 pounds of olives. While learning about the extensive milling process, he also educates them on fruit fly prevention and other important farming practices.
Recommendations

Our Team’s Recommendations for Kiler Ridge moving forward:

1. Increase marketing budget. With almost three times as much oil as last year, Kiler Ridge has to decide whether they want to increase their current customer base or sell some oil at wholesale price. Since wholesale price is close to half retail price, we believe that Kiler Ridge should increase their marketing budget in order to reach more customers. They can use local chefs and restaurants in order to promote their products, as well and increasing their social media use.

2. Improve their website. Paso Robles’ tourism brings Kiler Ridge a lot of customers. Whether it’s a group of people doing wine tours or a family that is here for a wedding, many people end up visiting Kiler Ridge, and after tasting their oils, end up purchasing their olive oil. However, commonly these become one time purchases. A good website should help them keep customers interested in their product even when they don’t have the chance to come back to the tasting room. Their current website setup is not as friendly and attractive as it could be. In order to have more recurring online customers we suggest they do the following modifications.

   a. They can have a friendlier setup that engages the reader and informs people who are not familiar with their products about all the qualities of their olive oil. Their current website doesn’t seem up to par with other olive oil producers in the region. A professional appearance could be very important to the customer, especially since they target people with a much bigger food budget than the average American. Thanks to a plethora of cheap, yet effective website design companies, it’s extremely easy nowadays to create a website that engages a customer and provides information in an eloquent and effective manner.
b. Offer small discounts to recurring customers. Finding new clients is usually a much harder task than keeping them. A discount as little as 5 or 10% would show their appreciation to consumers that purchase their products in a regular basis, and encourage them to keep doing so.

c. Offer small discounts to club members. Offering a discount to club members will act as an incentive to join the club in the first place, thus increasing the size of the club, as well as promoting continuous purchases.

d. Mentioning on their website how their bottles protect the oil from harmful UV light even though the bottles seem to be made from clear glass. Olive oil decays much quicker when exposed to a specific frequency of UV light. Many people in the food world are becoming aware of this and are looking for bottles that protect the oil from light. People that use aluminum cans or dark bottles don’t have to advertise that their bottles protect the oil because people can easily assume that. However, Kiler Ridge uses a bottle that seems to be clear, but it has a slight blue tint that blocks the specific UV frequency that harms the olive oil. If people are not aware of this, Kiler Ridge might seem like a lower quality company that isn’t willing to pay the extra price to protect their oil. However, when people know about their special glass they realize that Kiler Ridge is a company that is prepared, innovative and has high quality standards.

3. Increase milling capacity. With their current equipment they are able to mill close to a ton of olives an hour. However, during this harvest their current milling capacity wasn't enough to cover all the work they had available. Other mills in the county broke down, and many of their clients reached out to Gregg to get their olives pressed. Nevertheless, in several occasions he had to say no since their milling schedule was already full. By doing a couple of upgrades to their current milling line they could significantly increase their milling capacity. With the purchase of an additional kneading machine and a more
powerful extraction machine they could double their milling capacity for less than 20% of the cost of a new line.

4. Buy more olives from local growers, especially during low yield years. With a much larger production this year, Kiler Ridge will have to develop a bigger customer base. With the high fluctuation in the per-acre yield of oil, Kiler Ridge will have to find a way to supply oil for their increasing demand during years with low yields. If the improvements to the mill are done, the number of people that mill their olives with Kiler Ridge should increase. This would give Gregg the opportunity to purchase oil from growers before their oil even reaches the market. Gregg would have the huge advantage that he would be able to see the quality of the oil and the olives that were used to make it, and the convenience of purchasing it on his own property.
Appendix

Figure 1: Olive Oil Production around the World (Source: IOOC)

Table 1 U.S. Production figures for Olives. Source: USDA-NASS

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres Bearing</th>
<th>Production (In tons)</th>
<th>Yield Tons/Acre</th>
<th>Processing (in Tons)</th>
<th>Crushed Olives (In Tons)</th>
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<td>94,000</td>
<td>2.54</td>
<td>72,904,000</td>
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<td>4.15</td>
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<td>46,300</td>
<td>1.49</td>
<td>32,209,000</td>
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California Olive Production
2009-2015

Figure 2 California Olive Production Figures (in Thousands). Source: USDA-ERS

Production Comparison
2000-2013

Figure 3 Production comparison between EU, US, and California (in thousand tons). Source: USDA-ERS and IOOC
Figure 4 Kiler Ridge Yearly Oil Production. Source: Kiler Ridge

Oil fresh from the Kiler Ridge press

Source: Kiler Ridge
Frantoio:

Source: Kiler Ridge