

ANCIENT PROCESSES / MODERN APPLICATIONS

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Trip Highlights

- Epicurean experiences at Napa Valley institutions
- Behind-the-scenes with Vincent Arroyo
- Passion and olives: The McEvoy Ranch
- Wine on an industrial scale: Kendall-Jackson Winery

OIL AND WINE IN THE NAPA VALLEY

After a productive week-long workshop hosted by Dr. James C. Seferis focusing on the management of technology and polymer science from February 5-9 a select group of participants traveled to the Napa Valley to study the two oldest chemical processes, wine and olive-oil production.

This group was composed of a diverse mixture of nationalities, backgrounds, experiences, and objectives. Common to all the participants was a desire to educate themselves about these ancient processes and understand how they are implemented and utilized in a modern setting.

The trip was a well-balanced mix of business and pleasure as the participants learned while enjoying an environment of exceptional natural beauty. The trip began with visits to several local wineries and restaurants that embrace a Mediterranean, Epicurean lifestyle and philosophy. The group continued on to tour several wineries



The group outside of the Whitehall Lane Winery in the Napa Valley

and olive oil ranches. This allowed the group to get a behind-the-scenes look at how wine and olive oil production processes are implemented on a variety of scales, ranging from simple, hands-on operations to large-scale industrial processes. Overall, this tour allowed the group to investigate these

ancient processes and develop a deeper understanding of the significance of perception in applying them in a modern setting.

WINE SPECTATOR GREYSTONE RESTAURANT

After a scenic drive through San Francisco and the Golden Gate Bridge the participants began the weekend with wine tasting at the Whitehall Lane winery. The group continued on to an excellent dinner at the Wine Spectator Greystone Restaurant. This restaurant is unique in that it acts as an

educational institution through the Culinary Institute of America to teach food, wine, and hospitality professionals.

The Greystone restaurant is distinguished by its status as a not-for-profit institution. This allows it to

supply the highest quality education because it does not need to focus on profits. Freed from investors' demands, the Greystone is liberated to educate and entertain on the highest level.

VINCENT ARROYO WINERY: LOCAL DEVOTION TO EXCELLENT WINE

The group's first exposure during the trip to wine making and olive growing began at the Vincent Arroyo Winery in Calistoga, California. Vincent began his career as an engineer but later decided to switch gears and begin making wine, an endeavor he finds profoundly satisfying. Vincent described this lifestyle shift in *Clever Magazine* issue 17 by saying "I moved to Calistoga because I wanted to do something where I could call the shots. I wanted to make my own decisions and be my own boss. I think I could have been happy and successful doing another kind of work, as long as I could

make my own way. I chose to be a farmer because it is something I knew how to do and had an interest in".

Vincent runs a small operation that produces reasonably priced high quality wines and has recently moved into olive oil production. Vincent Arroyo is an excellent example of a man who has chosen to follow his own path in life and work in an area about which he is extremely passionate. This passion is evident in the way he operates his winery and his devotion to customer service. When interviewed in *Curious Magazine*, issue 17, about his favorite part of the job Vin-

cent answered, "I'm not a wine snob and I don't try to intimidate anyone. Most of my customers are very impressed and appreciate the fact that they actually get to have a drink with a real wine maker. That makes me feel good."

Vincent Arroyo has embraced wine and olive oil making and his passion for this work was readily apparent and infected the group with a desire to learn more.

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-Vincent Arroyo in
Clever Magazine Issue

17



Vincent Arroyo



Vincent Arroyo Winery in Calistoga, California

VINCENT ARROYO ON WINE

Discussions with Vincent Arroyo during the tour of his winery revealed some key insights into the nature of wine and wine-making as well as what distinguishes an excellent wine from its many competitors. According to Vincent there are three main sensations that make up the total experience of "tasting" a wine. The first is the way the wine smells, or the "nose". This is typically the first sensation a person receives and

is key to setting the stage for the sensations to come. Next comes the "mouth feel". This is more than how the wine tastes. It encompasses the entire range of sensations in the mouth as a wine is consumed.

The last sensation is the aftertaste. This lingers in the mouth after the wine is gone and

is the last thing the drinker experiences. No one of these characteristics can carry a wine, they must come together and create a final synergy that leaves the drinker relishing the experience.



A selection of wines from the Vincent Arroyo Winery

OLIVE OIL AT THE MCEVOY RANCH

The McEvoy ranch is the result of the dedication and desire of



Rugged and beautiful landscape at the McEvoy Ranch

Nan Turner McEvoy. After a long career in the newspaper business Nan decided to embark on a new venture and develop an olive-oil ranch that produced the highest quality product possible. Extensive research led to the establishment of the 550-acre ranch in 1991. The ranch supports 11,000 olive trees, the majority of which have been imported from Italy. The ranch consists of six main types of olive trees: Frantoio, Leccino, Pendolino, Maurino, Coratina, and Leccio del Corno. These varieties all possess different levels of fruitiness and speeds of ripening which allows the ranch a great flexibility in the character of the oil it produces as well enabling a great agricultural diversity.

The McEvoy Ranch produces these olive trees for sale, but the bulk of its focus lies on the production of premium olive oil. The olives are painstakingly harvested by hand or pneumatic combs. These olives are processed within a few hours of harvesting to maximize their freshness. Nan McEvoy imported

an impressive Rapanelli olive press from Italy that crushes the olives with huge stone wheels. This press is an amazing marriage of modern technology and ancient materials and techniques. Once crushed, the olives continue on to the unique "Sinolea" process that "massages" the oil out of the olives using thousands of steel blades. This technique does not require the use of heat, resulting in a very high quality oil that has an extremely low

acidity. Finally, the olive oil is sent to a pair of centrifuges for a final separation before it is bottled and distributed.

The McEvoy ranch produces some of the highest quality olive oil, but is also devoted to other premium food products. The Ranch produces an excellent honey from its own beehives and sells it in conjunction with its other products. Overall, the McEvoy ranch is determined to produce the highest quality products from the best materials available.



Imported Italian olive oil press

"Our olives are typically harvested in late fall, just as the fruit is turning from green to a rich amethyst in color; this early harvest results in oil with a golden-green hue and the distinctive peppery character of Tuscan-style extra virgin olive oil."

-McEvoy promotional literature

THE MCEVOY PHILOSOPHY

The McEvoy Ranch is devoted to producing ultra-premium items with a minimal environmental impact using the most authentic methods possible. Quality of the end product is only a part of the McEvoy philosophy. The entire process is optimized to work efficiently and effectively.

This philosophy is evident in Nan McEvoy's devotion to obtaining authentic processing technology and the finest olive trees possible.

The entire McEvoy Ranch is certified organic and produces its olives without the use of chemical pesticides or unnatural fertilizers.

The olive processing system is designed to have a minimal environmental impact and a large portion of the waste is reused or recycled.



Dining room at the McEvoy Ranch

The McEvoy Ranch views the whole system of olive oil production as important and has developed a simple, natural, and efficient process to produce olive oil of exceptional quality.

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KENDALL-JACKSON WINERY: THE VINTNER'S ART ON AN INDUSTRIAL SCALE

On the final day of the wine and olive oil trip the group toured the facilities of the Kendall-Jackson Wineries in Santa Rosa, California. This experience was an interesting and educational contrast to the small-scale, passionate operation of Vincent Arroyo and the high-end, premium organization of the McEvoy Olive Ranch. Kendall-Jackson produces a wide variety of wines that are typically moderately priced and developed for consumption within a few days of their purchase. One of the most striking things about the Kendall-Jackson facility was its scope. This winery produces a very large quantity of wine and, as such, requires a completely different set of processes and controls in order to effectively produce a large amount of wine in a short period of time.

Whereas Vincent Arroyo's winery was small and focused on hands-on production, the Kendall-Jackson Winery was large and highly automated. Another interesting observation involved the presence of science in the wineries. The Vincent Arroyo Winery performed some lab tests to determine the characteristics of their wine, but this was secondary to the overall operation. At the Kendall-Jackson Winery the wine was subjected to a multitude of tests in a sophisticated laboratory designed specifically to analyze the wine and its character.

As the tour ended the group was exposed to an emerging problem in the wine industry. Cork. The world's supply of cork comes primarily from Portugal and demand

is quickly outstripping supply. A replacement for cork is an inevitability, but current synthetic corks do not have the gas permeability characteristics that are necessary to properly age wine. Much work remains to be done to find a suitable replacement for this increasingly precious natural product.

Kendall-Jackson showed how an ancient process can be scaled to industrial production levels and highlighted the changes that occur during this process.

LESSONS LEARNED: ENGINEERING PERCEPTION

During the tour of the Napa Valley, the participants were exposed to a variety of institutions and processes that all focused on olive oil and wine production, two of the world's oldest chemical processes. These processes have changed very little over the years, but they have been adapted and modified in small but crucial ways, mainly through scaling and the introduction of mechanical instead of human labor. The tour visited many organizations, and each one emphasized that perception and the control of the consumer's perceptions are crucial for the establishment of a successful product or process.

When a consumer purchases an item or service

they want to feel like they are getting something special that they would not otherwise receive. This was evident in the excellent service and presentation of the food at the Wine Spectator Greystone restaurant and the ultra-premium olive oil being produced at the McEvoy Ranch. The consumer will pay a large amount of money for a product or service if they believe it is the best. Establishing this mentality is a key part of the marketing strategy of many companies. Simply having the best product is often not enough to sell something. The consumer must believe the product is the best, regardless if it is or not, if they are to purchase it.

This process of cre-

ating perception was called "Engineering Perception" by Dr. James C. Seferis. Any engineering process must deal with perception, both the public's perceptions of engineering and processes and the creation of a certain image for the process or product. Although they are often separated, engineering and perception are closely related and must be considered together in any successful venture.