

Japan Wine Project Agriculture Viable in an Advanced Country

By Ernest SINGER



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Since the Second World War, agriculture has become increasingly subsidized in Japan as young people abandoned the countryside in droves. The average age of farmers is now past 60; the vast majority of agricultural land lies fallow and, in all probability, not a single farm today is economically viable. It is a probable and unfortunately accurate prediction to assume that at the present pace in 20 years agriculture will have disappeared from Japan.

The general perception among the public is that viable agriculture is not possible in an industrialized nation. However, taking a global perspective, other “so-called” advanced nations such as France and the United States have important, profitable farming sectors. From the mid-Western states to California, farming is the dominant industry and in France, wine is the second largest export commodity after airplanes and even ahead of automobiles!

So the question is, “Why has agriculture declined only in Japan?” The answer lies in the outmoded legal structure established during the American Occupation following the war and the perception of agriculture as based on heavily subsidized rice production. Prior to 1945, small truck/subsistence farming on behalf of absentee landlords was the norm, an anachronistic remnant of the feudal era. The Occupation forces and the new government forcibly took the ownership away and gave the land to the traditional cultivators in order to protect them from the abuses of the past. The intentions were honorable but it created enormous inefficiencies, producing a large rural welfare class.

Global State of Modern Agriculture

In ancient times, this type of system worked for subsistence farmers who lived off the land. However, throughout the rest of the world, modern advances have changed the face of agriculture. The new business model that works elsewhere is large mechanized farms that take advantage of modern distribution to create products for a global market. Driving much of this advance has been the increased consumer demand for healthier, safer food products.

The two major changes in vision are the result of over 60 years of intense research and international cooperation. Unfortunately Japan has as yet not significantly taken advantage of these important developments that have changed the worldwide face of agriculture.

Wine: Ideal Product for Agricultural Business Model in Japan

First of all, the worldwide boom in Japanese cuisine has created a multimillion dollar market for wines that match the cuisine. For example, the international popularity of French wine is because “French” is traditionally recognized as the world’s most sophisticated cuisine. The recent universal recognition (and popularity) of Japanese food despite having no Japanese wines internationally

available has created an instant market that begs to be tapped.

Secondly, wine is in reality “processed” grapes. Most agricultural products are sold *inexpensively* as “raw products.” Properly cultivated grapes can be easily fermented into very good wine with multiple times the added value.

Climactically, Japan has long been considered out of the sphere of potential winemaking. Modern research has brought Japan for the first time within the parameters for winemaking and has opened the possibility for natural wine made in accordance with international standards – a fundamental requirement for entrée into the broader global marketplace.

Winemaking Vaulting Japanese Agriculture into 21st Century

The first project was to make a wine in accordance with internationally acceptable rules with local, indigenous grapes. We had considered using famous European varietals such as Chardonnay or Cabernet but decided against it because the weather in Japan does not allow them to ripen properly. Moreover, production costs are too high to compete with comparable wines from other countries.

Even more importantly, the appeal of wine in contrast to other alcoholic beverages is its uniqueness. With beer or whisky, the consumer generally has a favorite that he or she imbibes regularly. However, it is very rare for a wine drinker to have the same variety all the time. Something different and unique spikes curiosity – especially so when drunk with an unfamiliar cuisine.

We examined the local grapes and, although there are many varieties, they were all table grapes. This presented two issues. First, the only grape that is suitable for wine is “*vitis vinifera*” and the majority of table grapes are other varieties. Secondly, even if we found the right grape, would it have all the right components in the right quantities to be a “world-class” wine?

Technically speaking, grapes that are eaten are valued by degree of their sugar content and taste is secondary. However, when wine is made, most if not all of the sugar is fermented into alcohol. In the case of table grapes, what remains is just alcohol and water or in some cases unpleasant or foul flavors. What makes “*vinifera*” distinct is a specific group of complex carbon molecules called “aroma precursors.” At the same time that the sugars are converted into alcohol, the yeast also breaks up a small percentage of the “aroma precursors” into smaller organic molecules that have wonderful flavors and aromas. This is the basic and most important component of “real” wine. Unfortunately, these pleasant aroma precursors are nonexistent or minimally present in non-*vinifera* and therefore they are unsuitable for wine. Though precursors can be found in other grape varieties, after fermentation they change to unpleasant or “foxy” aromas.

We took samples of various local table grapes and sent them to the University of California Davis for analysis. UC has the largest

PHOTO 1



A traditional vineyard based on a pergola method

database of grape DNA in the world. The result was that two ancient Asian table grapes – one Japanese and the other Chinese – were not only “vinifera” but actually of European origin because more than a millennium in the past. This created the possibility of making world-class wine according to classical European standards.

With this data in hand, we hired as a consultant Professor Denis Dubordieu of the University of Bordeaux, possibly the world’s most renowned white wine maker. After tasting samples of Japanese wine, he agreed to travel to Japan to oversee our project. The result of his initial visit was that although it seemed possible to make acceptable and possibly serious wine, Japanese table grapes had never achieved sugar levels high enough to reach 12 degrees of potential alcohol, a level that is generally considered the minimum for quality dry wine.

He proposed two possible solutions. One was that we make a wine of low alcohol content – 10 or 11 degrees. His reasoning was that although 12 degrees are generally an industry standard, there are some wines – Portuguese *Vino Verde*, in particular – that are acclaimed worldwide and accepted on the international marketplace even though they average only 10% alcohol.

The second idea was to cultivate vines specifically for wine production rather than table grapes. Traditionally, grape vines in Japan are planted to maximize yield on small plots of land and for consistent appearance to make them attractive to the consumer. To achieve those results, the vines are planted in overhead arches with four long branches emanating from the trunk – a *pergola* method (Photo 1). The result is 200 to 300 bunches per vine, with bunches of close to identical size and large attractive grapes. On the other hand, the standard for wine grapes in the West is the VSP method (Photo 2) – low, *bonsai*-like vines with one or two branches planted close together and producing only four to 12 bunches per plant generally with much smaller grapes.

The Actual Wine

From the first vintage in 2004, using available grapes, his instructions were followed and we created a low-alcohol wine which met with immediate success because of its purity of fruit and adaptability to Japanese cuisine. Interestingly, free to work only with the natural sugar, we made the first wine in Japan that was completely unadulterated and unmanipulated. Both Robert Parker, the well-known critic, and Shinya Tasaki, the world champion sommelier, along with Dubordieu found distinctive flavor and aroma components in the wine that were unique to Japanese food – a very pleasant surprise. Even though the grapes’ ancestors originated in Europe many years ago, over the centuries they had apparently become acclimatized to Japan and developed a local character similar to the phenomenon found in the great wine regions of Europe.

At the same time, we began planting vines according to wine

PHOTO 2



A Western-style vineyard based on the VSP (vertical shoot positioning) method

rather than table grape standards in nine sites throughout central Japan. These were experimental projects that had never been tried with Japanese grapes and we had no assurance of success.

The first harvest took place in 2009 and the wine was released in March 2010 (Photo 3). The result was sugar levels 50% higher than “arbor” grapes, greater concentration of flavors and reduced bitterness in the skins. We were consequently able to produce a wine that was completely different from previous vintages. It had more body, was richer and had a silky texture heretofore never seen in Japanese wine.

With only limited production in the first year, the wine was parceled out to the top Japanese restaurants in Tokyo and Kyoto and not sold in retail markets. A few bottles were put aside for export.

The Future

Now two things have been proven. First, it is possible to make world-class wine in Japan. Secondly, there is a major international market that could rival the wine exports of European companies. A third and last requirement is economic viability. Using international models, the most important issue is the size of the vineyard.

After considerable research and by studying examples in other countries, we arrived at several conclusions. First, the size of the vineyard has to be at least 4 hectares to operate efficiently. The average farm in Japan is much less than 1 hectare, which makes it difficult, if not impossible, to consider replanting existing farms.

On the other hand, there are vast tracts of unused land, zoned for farming. Much of this land is not considered prime agricultural property because it is sloped. Fortunately, slopes producing good drainage are ideal for wine grapes.

Over the next year, we are planning to make our first “model farm,” an 8-hectare vineyard that should be in total production in five years. Depending on the quality of the grapes, the annual expected turnover should be between \$500,000 and \$2 million.

Although our project is still in its infancy, we feel without a doubt that there is both a future and an export market for agriculture in industrialized Asian nations. We look forward to others – private individuals, companies and investors – to assume the initiative to make further steps and to join us in advancing this exciting endeavor. The possibilities are unlimited and we await their materialization. **JS**

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PHOTO 3

